MONTANA SAGE GROUSE HABITAT CONSERVATION PROGRAM

2021 ANNUAL REPORT

THIS REPORT COVERS THE PERIOD JANUARY 1 THROUGH DECEMBER 31, 2021

MONTANA SAGE GROUSE
Habitat Conservation Program

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INTRODUCTION

The Greater Sage Grouse (*Centrocercus urophasianus*, hereafter referred to as sage grouse) is a native species in Montana. While they are found in ten other western states and two Canadian provinces, Montana and Wyoming are the key strongholds for sage grouse across its range.

Sage grouse interact with their habitats at a landscape scale and are almost completely dependent on sagebrush for every phase of their life history. Intact, native sagebrush rangeland at a landscape scale is necessary for their survival. Science has shown that sage grouse are particularly sensitive to habitat loss and fragmentation caused by conversion of native sagebrush range to cultivation, invasive species, and other anthropogenic development. Population declines have been attributed to these changes in habitat at both local and landscape scales.

In 2010, in response to a petition for protection under the Endangered Species Act (ESA), the United States Fish and Wildlife Service (USFWS) found that listing sage grouse range-wide was "warranted but precluded" by other higher-priority actions. In 2015, as a result of a comprehensive stakeholder process and the work of Governor Bullock's Greater Sage Grouse Conservation Advisory Council, the Montana Legislature passed the Greater Sage Grouse Stewardship Act (hereafter, Stewardship Act or Act).

The Act accomplished several important things in demonstrating Montana's commitment to implementing a comprehensive conservation strategy: the Montana Sage Grouse Conservation Strategy (hereafter, Strategy or Conservation Strategy). The Act: 1. Created the Montana Sage Grouse Oversight Team (MSGOT); 2. created the Sage Grouse Stewardship Fund (hereafter, Fund or Account); 3. Appropriated $10 million for the Stewardship Fund grants and provided statutory guidance for how the funds could be spent; 4. Established that impacts to sage grouse habitat would be mitigated and provided key statutory guidance; and 5. Delegated rulemaking authority to MSGOT. Separately, the 2015 Legislature also appropriated funds to implement the Act and Strategy through MSGOT and the Montana Sage Grouse Habitat Conservation Program (hereafter, Program).

The Program is guided by Executive Order 12-2015 (EO 12-2015; hereafter, Order or EO). The Order guides where and how development and other activities occur in designated sage grouse habitat. Certain limitations, stipulations, or conditions may apply, depending on the project or activity, its location, and its duration on the landscape. Other components establish general practices that apply to everyone. The Order applies to all programs and activities of state government, including permitting, grant programs, and technical assistance. Through a consultation process, the Program works with project proponents to first avoid impacts, minimize impacts, and restore impacted areas. Compensatory mitigation may be required for residual temporal or spatial impacts that remain after avoidance, minimization, and restoration measures.

The Program provides numerous interim reports and briefings to MSGOT and the public throughout each calendar year. A formal written report is produced on a calendar year basis. This report covers the period from January 1 to December 31, 2021. Additional information on the Program and background information about the Strategy can be found at www.sagegrouse.mt.gov.

SUMMARY OF 2021 PROGRAM ACTIVITIES

Project Consultations

In 2021, the Program received a total of 329 consultation requests. These included 41 projects for which work was carried over from previous years (2017; n=2[1], 2019; n=3, or 2020; n=36). As of December 31, 2021, the Program completed reviews for 296 projects (90%). Of the remaining 33 projects, 15 projects were withdrawn, and 18 projects were carried forward into 2022. The majority of projects reviewed by the Program in 2021 were proposed in General Habitat (n=234, 71% of 329 projects) compared to either a Core Area (n=94, 29% of 329 projects) or Connectivity Area (n=1, <1% of 329 projects).

Efforts to Improve Implementation

The Program routinely interacts with state permitting agencies and stakeholders to identify areas of concern and cooperatively develop solutions on an ongoing basis. A pragmatic, collaborative problem-solving approach has been taken, alongside MSGOT, the Montana Legislature, and stakeholders, including state and federal agencies, private landowners, and other interested organizations and parties when issues are identified.

The Program continued to work with two independent contractors throughout 2021 to accomplish two tasks (1) implement improvements to the Program website and (2) update the Habitat Quantification Tool (HQT) basemap.

Program Website Improvements

The Program continued to implement upgrades to the website throughout 2021. These upgrades were based off feedback from proponents, stakeholders, and other website users. While some of these changes were minor (added help text, improved workflow, bug fixes), the major upgrades included:

- Adding a Conservation side to the website allowing proponents to submit preservation, restoration, and/or enhancement projects for Program review. These projects may be permittee-responsible projects meant to offset specific development projects, Stewardship Account Grants, or a conservation activity may just require a consultation letter from the Program in order to obtain state permits or authorizations. This Conservation side facilitates a workflow very similar to the existing Development side.
- Incorporating the HQT workflow inputs and results into the web application. The HQT results can now be made visible to proponents through the web application.
- Additional feature types were added, and point features are now available for certain disturbance and activity types.
- The HQT basemap is now a visible, selectable layer on the map. This allows proponents to see the habitat quality within designated sage grouse habitat and their Project area and may help inform project siting decisions.

[1] For each of these two Projects, the proponent reached out to the Program with changes to their existing project at the end of 2020, after each project had reached the Completed Review stage. These projects were then moved back to Due Diligence to revise the original consultation. These updated projects then reached Completed Review again in 2021.

- Lek buffer layers are now visible, selectable layers on the map. This allows proponents to determine if stipulations from Executive Order 12-2015 may be applicable to their project and help inform siting and timing decisions.
- Users can now print maps of their project from the web application.
- Map tools were added that allow measuring distances.

HQT Basemap Revision

The Program worked with an independent contractor to validate proposed project data submitted by developers and determine implementation status using the most recent NAIP aerial imagery and other data sources. This is the same contractor hired in 2015 to create the existing disturbance data layer. This iteration has been completed. Additionally, the Program continues to work with this contractor to provide the next iteration of the existing disturbance layer.

Throughout 2021, Program staff continued to identify and update individual spatial data layers within the HQT basemap with the most recently available data from the same publicly available data sources used to create basemap v1.0. It is anticipated that the next version of the basemap will be released in early 2023.

Implementation of 2021 Legislative Amendments to the Stewardship Act

The Program implemented three bills that were passed during the 2021 Legislative Session. Senate Bill 230 sought to transfer a percentage of the Program's compensatory mitigation to the State General Fund to repay the initial cost of implementing the Act. Senate Bill 230 directs the Program to transfer 10% of any end of the year surplus balance to the State General Fund.

Senate Bill 249 transferred funding of the Program through a cost-sharing agreement between the Department of Fish, Wildlife, and Parks and the Department of Natural Resources and Conservation. This also recodified the Montana Greater Sage-Grouse Stewardship Act in Title 87, amending Title 76, MCA.

Senate Bill 284 provided the potential for a reduction or waiver for some compensatory mitigation obligation incurred by counties, cities, and towns related to Opencut mining operations. In order to be considered under this Bill, a project must meet the following criteria: (1) the Opencut permit is held by a county, city, or town; (2) the Opencut operation is outside of a Core Area; (3) is located greater than 0.6 miles from the center of any active sage grouse lek; and (4) is undertaken and completed outside of the sage grouse mating season. Since this Bill became law on May 7, 2021, three mining projects were determined to fit the criteria. No mitigation was assessed for these three projects.

Other Efforts to Improve Implementation of the Strategy

On September 16, 2021, in an effort to foster increased transparency and efficiency, the Program hosted an HQT Webinar for MSGOT, developers, and members of the public. During this webinar, Program staff presented how the HQT process works from beginning to end as part of an ongoing effort to give users and interested parties greater access to information about the Program.

On October 14, 2021, MSGOT hosted a listening session for the public to share their thoughts and perspectives regarding the status of the Program. The outcome of this listening session was

positive feedback from developers, other agencies, and the USFWS, citing the importance of the State of Montana maintaining control over sage grouse management.

Synthesis of 2021 Mitigation Outcomes

In 2021, Montana achieved its goal of balancing conservation with development on a statewide basis and in one of the four Service Areas. Here, we report all debit / credit transactions including debits / credits created through Permittee Responsible projects. Between January 1, 2021, and December 31, 2021, Montana did not meet its mitigation specific habitat-based objectives in three of the four Service Areas. The Central, North Central, and Southeastern Service Areas generated fewer credits than debits for 2021.

All contributions to the Stewardship Account should be allocated towards Stewardship Account grants to offset the impacts for which the contributions were made. The timing of the next grant cycle is dependent upon how quickly the Account balance is replenished after the 2021 grant award funds are transferred to close those funded conservation projects. The Program anticipates the next grant round to occur in 2022.

Presently, there are no third-party conservation banks or habitat exchanges operating in Montana. Stewardship Account grants or permittee responsible projects are the only mechanisms available to developers at this time. To date, the use of Permittee responsible projects have been rare but remain a strongly encouraged option for fulfilling mitigation requirements.

Montana Sage Grouse Habitat Conservation Program Background

Overview of the Consultation Process for Development Projects

Montana EO-12-2015 requires the Program to review all proposed activities in sage grouse habitats designated as a Core Area, General Habitat, or Connectivity Area that require a state permit or authorization or utilize state funds. EO 12-2015 also applies to work undertaken by state agencies themselves.[2] If the proposed activity will take place outside of these designated habitats, review is not required. MSGOT has granted certain limited exemptions from the review requirement[3].

Through the consultation review process, the Program works with project proponents before they submit applications for state permits, authorizations, or grant funds. This is to attempt to avoid or minimize project impacts to sage grouse and their habitats through project siting, design, construction dates, and implementation. This enables the project to be consistent with the requirements of EO-12-2015.

Completion of a sage grouse review is required prior to initiating a state permitting process (Figure 1). State permitting programs require evidence of a sage grouse review be provided at the time permit applications are submitted, if applicable. If evidence is not provided and sage grouse consultation is required, permitting programs will refer the applicant back to the Program.

[2] *See* EO 12-2015 Attachment D.
[3] *See* EO 12-2015 Attachment F.

The Program undertakes a review for consistency with the requirements of EO 12-2015. If the proposed activity is not consistent with EO-12-2015, the Program will work with the proponent to determine the best solutions to both achieve consistency with EO-12-2015 and to facilitate permitting of the proposed activity. Additionally, the Program works with proponents to determine what, if any mitigation is required to offset the impacts of the development project. See the Mitigation section below.

Once the review has been completed, a letter and mitigation plan, if applicable, will be produced. A PDF copy of this documentation is attached to the project record and is available through the proponent's project link in the web application.

The proponent then attaches the documentation to the permit application submitted to the relevant state permitting agencies. The state agencies include the Program's recommendations as stipulations on the permit. The Program works closely with the various state agencies, their permitting programs, and their respective stakeholder groups to identify and resolve issues as well as identifying opportunities for increased efficiency.

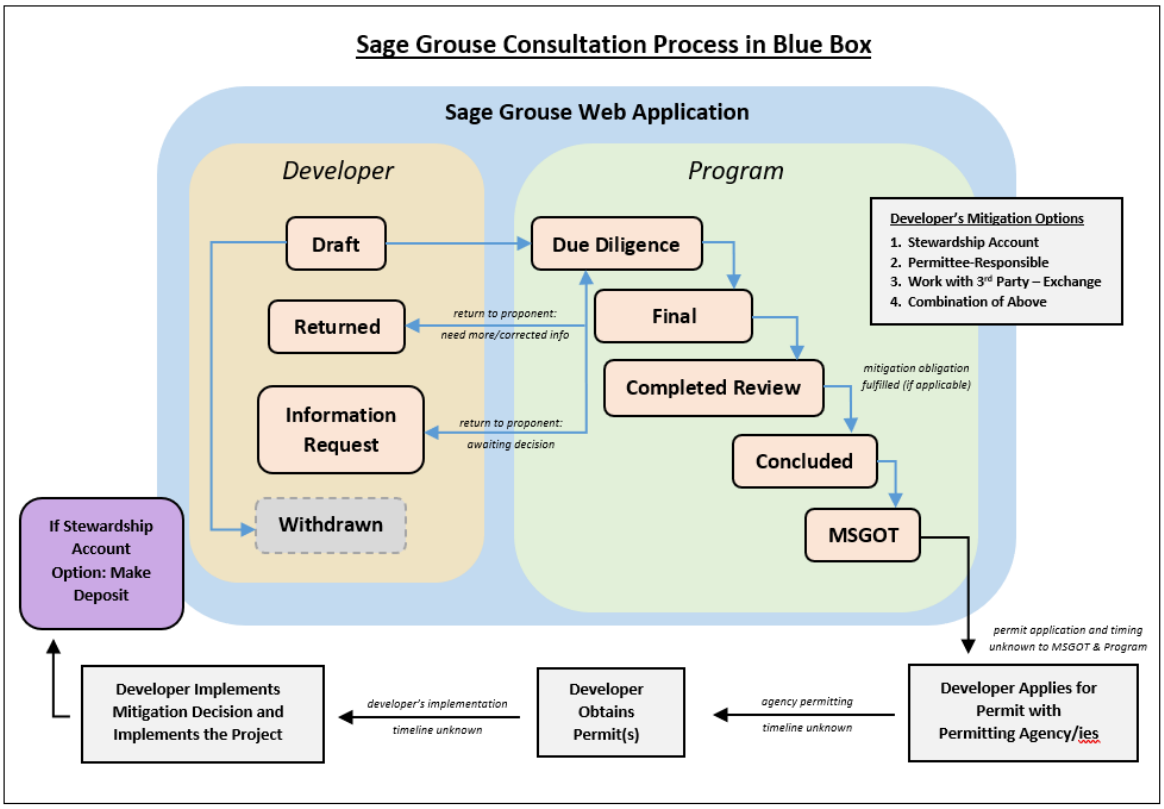

Figure 1. Overview of the Program consultation process. Developer activities are shown under Proponent in the yellow box, and Program activities are shown in the green box. A project may be moved between stages.

Project Review Life Cycle in the Web Application

The Program strives to review proposed development projects in a timely, efficient manner. In doing so, the Program facilitates the State's permitting process to move development projects forward to implementation.

Project proponents initiate the consultation process by providing information through the Program's website. This creates an orderly, consistent way for the Program to receive and process requests. Information provided to the Program is kept secure and is not sold or disseminated. Each submission is assigned a unique identification number that is used to track the project. The project proponent receives automated emails verifying that the information was received by the Program, if the project has been returned, and when the review has been completed.

If the proposed activity is not in designated sage grouse habitat, the website notifies the proponent immediately and refers the proponent directly to the permitting agency, because a Program review is not required.

Once a developer logs into the website and initiates the consultation process, the project advances through individual stages of review (Figure 1). When a developer starts a new project, it is in the *Draft* stage. The *Draft* stage provides developers with opportunities to proactively design and site projects to avoid designated habitat altogether, when possible, avoid sensitive areas near leks, and consider other ways to minimize impacts. Once started, projects are saved in the *Draft* stage, and Developers can access and work on their projects anytime.

When the developer is ready to submit the project and does so, the project advances to the *Due Diligence* stage and the Program can then begin the review process. If the Program determines that changes need to be made to the Project submission in order complete the review, they will *Return* it to the developer so that the necessary adjustments can be made. A project may be moved to *Information Request* when the Program is waiting for the proponent to make a decision involving offsetting mitigation outcomes, awaiting federal agency outcomes of National Environmental Policy Act (NEPA) analysis, or similar informational needs. The *Information Request* stage was incorporated into the website and review process workflow late in 2021.

Once the project is resubmitted, the project is in the *Due Diligence* stage again. The Program once again starts reviewing the project. A project may move between one or more of these stages multiple times before the Program has all the necessary information to continue and complete the review process.

When Program staff have completed all the technical work and coordination with developers, staff move the project to *Final Review*. Here, the staff and Program Manager review all the technical work, conclusions, and recommendations. Errors or omissions can be addressed at this time, if any. Once the Program Manager gives final approval, the project advances to *Completed Review*. *Completed Review* signifies the completion of the Program's consultation review under EO 12-2015. If the outcome of a project did not result in a mitigation obligation, it will then be advanced to *Concluded*. Otherwise, projects will remain in the *Completed Review* stage until the mitigation obligation has been fulfilled. At which time, the project will advance to *Concluded.* This stage was incorporated into the review process workflow in November 2021.

Program staff upload final consultation documents to a developer's project folder on the Program's web application. Developers can access the final documentation from the web application and download documents, as desired. The project and all its related documentation are stored securely in the database and can be accessed at a future date, if needed. The review process is then finished, and the project review life cycle is completed. Proponents are also able to withdraw their own projects at any time and for any reason. Proponents do not have to provide advanced notice or provide a reason for withdrawing their own projects. This has the effect of removing their project from the Program's review process and active workload. Withdrawing of a project by a proponent

does not signify a denial of consultation review or a rejection of the project by the Program. It simply means that a proponent has taken the step to withdraw a request for consultation on their own initiative. However, all project information is securely stored, and a proponent can re-activate a withdrawn project at any time by contacting the Program.

Project Type Categories and Disturbance Types

Every development project submitted to the Program is described first as a Project Type, and then further defined by the individual disturbances (i.e., Disturbance Types) associated with that project. The Project Type category describes the primary purpose of the project. The Disturbance Types reflect the new individual disturbance features that are typically associated with the Project Type. For example, the Energy-Wind Project Type entails construction of a new wind facility and individual disturbances necessary to construct a new wind facility may include turbines, new roads, new electrical lines, and a new substation (individual Disturbance Types). See Table 1 for a list of Project and Disturbance Types.

Table 1. List of Project Types and their associated Disturbance Types available to proponents through the Program's website.

Project Type	Associated Disturbance Types
Agriculture - Land	Building, Crop, Grazing, Livestock Area, Power Line, Road
Agriculture - Water	Bore Hole, Building, Irrigation, Pipeline, Power Line, Reservoir, Road, Soil Storage Pile, Stock Pond, Stock Tank, Water Diversion, Water Right Change/Clerical, Water Supply Well
Energy - Geothermal	Building, Facility Boundary, Pipeline, Power Line, Power Plant, Road, Storage Yard, Substation, Trench, Water Supply Well
Energy - Hydroelectric	Building, Facility Boundary, Maintenance Activities, Pipeline, Pond, Power Line, Power Plant, Road, Spillway, Storage Yard, Substation, Trench
Energy - Nuclear	Building, Facility Boundary, Pipeline, Pond, Power Line, Power Plant, Road, Storage Yard, Substation, Trench
Energy - Oil Shale	Building, Facility Boundary, Open Pit, Pipeline, Pond, Power Line, Processing Facility, Railroad, Road, Storage Yard, Well Pad
Energy - Oil/Gas	Building, Central Battery System, Collection Facility, Compressor, Field Boundary, Gas/Oil Well, Maintenance Activities, Monitoring Well, Pipeline, Plug and Abandon, Pond, Power Line, Power Plant, Railroad, Road, Soil Storage Pile, Storage Yard, Temporary Abandonment, Underground Storage Tank, Water Supply Well, Well Pad
Energy - Seismic	Buggy Lines, Cultural Survey, Facility Boundary, Road, Seismic Shot Hole/Probe Route, Storage Yard
Energy - Solar	Building, Facility Boundary, Field, Pipeline, Power Line, Power Plant, Road, Storage Yard, Substation, Water Supply Well
Energy - Tar Sands	Building, Facility Boundary, Gravel Pit, Pipeline, Pond, Power Line, Processing Facility, Railroad, Road, Storage Tank, Storage Yard
Energy - Wind	Building, Cable, Facility Boundary, Met Tower, Pipeline, Power Line, Power Plant, Road, Storage Yard, Substation, Trench, Turbine Pad
Forestry	Culvert, Firebreak/Dozer Line, Road, Timber Harvest
Habitat Treatment	Fire, Mechanical, Restoration
Infrastructure - Communication	Bore Hole, Building, Facility Boundary, Guy Wire, Met Tower, New Cable Route, Power Line, Replacement Cable Route, Road, Storage Yard, Tower Pad
Infrastructure - Industrial/Commercial	Building, Drone Path, Facility Boundary, Gravel Pit, Landfarm, Landfill, Laydown Yard, Parking Area, Pipeline, Pond, Power Line, Road, Septic/Sewer, Storage Yard, Stormwater, Underground Storage Tank, Water/Soil Sample, Water Supply Well, Water System
Infrastructure - Military	Base, Building, Gravel Pit, Parking Area, Pipeline, Power Line, Range, Road, Storage Yard, Water Supply Well
Infrastructure - Pipeline (Major)	Bore Hole, Building, Compressor, Facility Boundary, Laydown Yard, Pigging Facility / Launcher, Pipeline, Pond, Power Line, Road, Soil Storage Pile, Storage Yard, Trench, Water Supply Well
Infrastructure - Recreation	Building, Cable, Campground, Motorized/OHV Road, Motorized/OHV Trail, Park, Parking Area, Pipeline, Pond, Power Line, Septic/Sewer, Soil Storage Pile, Water Supply Well
Infrastructure - Residential	Building, Cable, Park, Parking Area, Pipeline, Pond, Power Line, Road, Septic System, Stormwater, Subdivision Area, Water Storage, Water Supply Well
Infrastructure - Transmission Line	Bore Hole, Guy Wire, Laydown Yard, Power Line, Road, Storage Yard, Substation, Tower
Infrastructure - Transportation	Airport Radio Tower, Airport Runway, Blasting, Bore Hole, Borrow Pit, Bridge, Building, CORS Site, Culvert, GeoProbe, Guard Rail, Interstate Highway, Laydown Yard, Parking Area, Pile Driving, Pipeline, Power Line, Railroad Mainline, Railroad Spur, Road, Signage, Spill/Remediation, Storage Yard, Underground Storage Tank
Mining	Building, Core Hole, Gravel Pit, Mine, Monitoring Well, Permit Boundary, Pipeline, Pond, Power Line, Power Plant, Railroad, Road, Shaft, Storage Yard, Stormwater Discharge Outlet Pipe, Trench, Underground Storage Tank, Waste Rock / Tailings / Overburden, Water Supply Well

SUMMARY OF 2021 CONSULTATION ACTIVITIES

The Program website and associated database provides interactive user tools, conducts automated analyses, and serves as a repository for sage grouse consultation review information. These three main functions yield the secured data the Program uses to create this report. These data were analyzed to create two unique summaries:

1. general metrics about the Program's consultation activities; and

2. specific metrics about development projects attaining *Completed Review* or *Concluded* status by December 31, 2021.

General metrics about the Program's consultation activities provide insights into the consultation review process itself, Program performance metrics, and where development projects are being proposed. Specific metrics about projects in either *Completed Review* or *Concluded* provide insights into what kinds of future development may occur and where in designated sage grouse habitat they may occur. For this annual report, the Program has filtered data to maintain consistency and replicability and reports 2021 data only.

It should be noted that the data included in this report are strictly for proposed projects, not implemented projects. It is likely that many of the projects reviewed are implemented within a short time frame of completing the consultation process. However, there are no existing mechanisms in place for the Program to monitor implementation status of the reviewed proposed projects, as permit issuance and project implementation occur completely outside of the established review process.

This disparity in time introduces unique nuances to data presentation in this report, where the data for such proposed projects may serve as an index for future disturbance on the landscape in sage grouse habitat. Reported data for proposed projects should not be understood as disturbances currently on the landscape.

Data Preparation Methods

Information reported below on the general metrics of consultation, and specific project metrics are derived using the SG4.0.1 database. Specific queries will either include or filter out specific data or projects according to the metric of interest.

As shown in Figure 1 above, every development project submitted through the web application follows a common workflow, beginning with *Draft*. *Draft* is a stage that is a virtual sandbox for project proponents who have not formally submitted their project for review. While the information is stored in the SG 4.0.1 database, the Program does not report on such projects and associated activities because the formal review process has not been initiated by the project proponent at this point. Therefore, projects still in the *Draft* stage are filtered out and excluded from reporting in this document.

The review stages included in the filtered dataset used for this report include *Due Diligence*, *Information Request*, *Final Review*, *Completed Review*/*Concluded*, *Returned*, and *Withdrawn* (Figure 1). The web application tracks the date/time stamp of when a project transitions from one review

stage to the next. Program performance metrics are based on calculating the number of days a project spends in each review stage using these date/time stamps.

Other filters applied to the dataset included restricting the dataset to projects meeting specific ranges of submission dates (*Due Diligence*) and completion dates (*Completed Review*). This allowed for the identification of projects that were being actively reviewed (*Due Diligence*, *Final Review*) during 2021. This includes projects that were submitted in 2018, 2019, or 2020 and completed in 2021 as well as projects that were still being reviewed at the end of 2021.

Lastly, as shown in Table 1, each major Project Type may have more than one individual disturbance associated with it. Specific metrics about Project Types and their associated disturbances are based on projects which attained a *Completed Review* stage, meaning the Program completed its review and provided written documentation to proponents.

General Metrics: Consultations and Program Performance

The Program received requests for consultation review on 329 development projects in designated sage grouse habitat in 2021 (Figure 2). For two projects, Program review was originally initiated and completed in 2017. For three projects, Program review was initiated in 2019 but not completed until 2021. For 36 projects, Program review was initiated in 2020 but not completed until 2021. The remaining 288 projects were submitted and reached *Completed* Review in 2021. This resulted in a total of 329 projects requiring sage grouse consultation in 2021.

Of the 329 projects the Program worked on in 2021, the Program completed sage grouse reviews for 296 projects (90%). Of the remaining 33 projects, the Program continued sage grouse reviews for 18 proposed projects into 2022 (i.e., *Information Request*, *Due Diligence*, and *Returned*) and 15 projects were withdrawn by the developer. At the close of 2021, the Program was actively reviewing (i.e., *Due Diligence*) six of the 18 proposed projects and was waiting for additional information necessary to complete the review from project proponents for the remaining 12 proposed projects (i.e., *Information Request* or *Returned*).

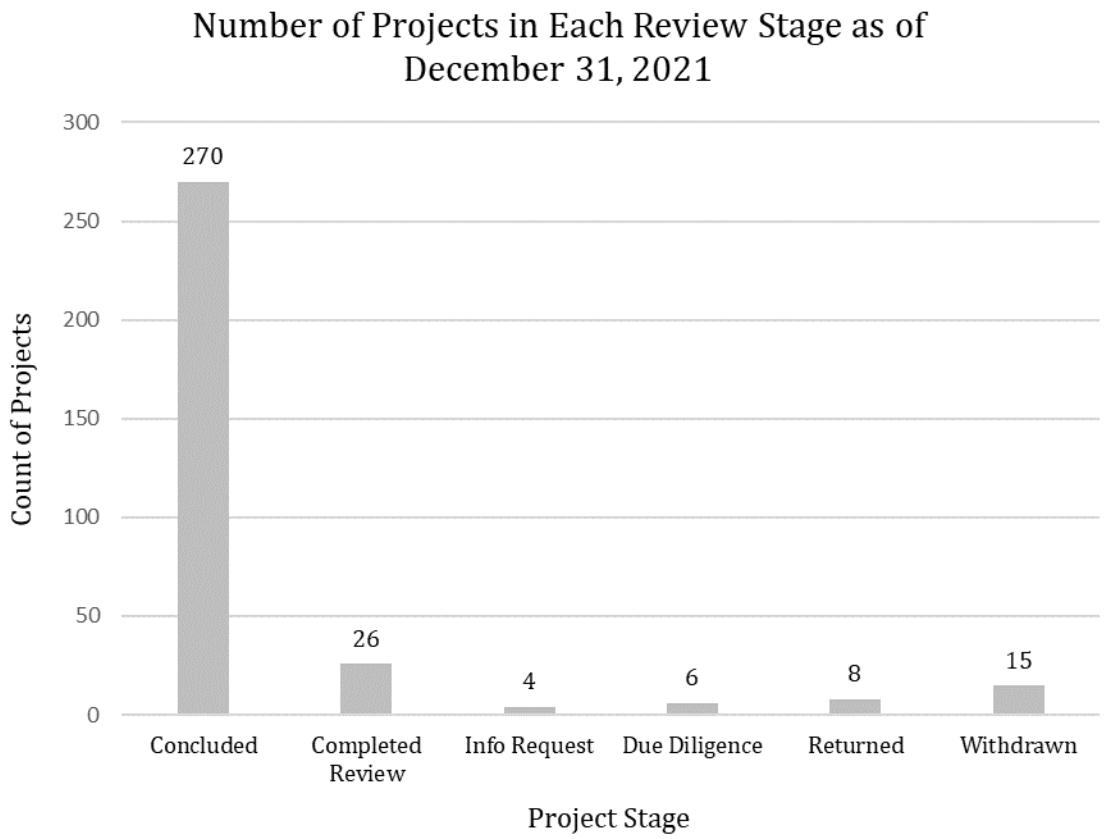

Figure 2. In 2021, the Program received a total of 288 new requests to review proposed development projects, and continued review on an additional 41 projects from 2017 through 2020. As of December 31, 2021, the Program completed reviews for 296 projects with the remaining 33 projects in either *Due Diligence* (Program is still reviewing the project), *Returned* or *Information Request* (developer is gathering the additional information need for the Program to complete a review), or *Withdrawn* (developer has withdrawn the project of their own accord and for their own reasons).

Project Review Status by EO Designated Habitat

Of the 329 projects reviewed by the Program in 2021, 71% were located in General Habitat (n = 234 projects), 29% were located in a Core Area (n = 94 projects), and <1% were located in a Connectivity Area (n = 1 project). See Figure 3.

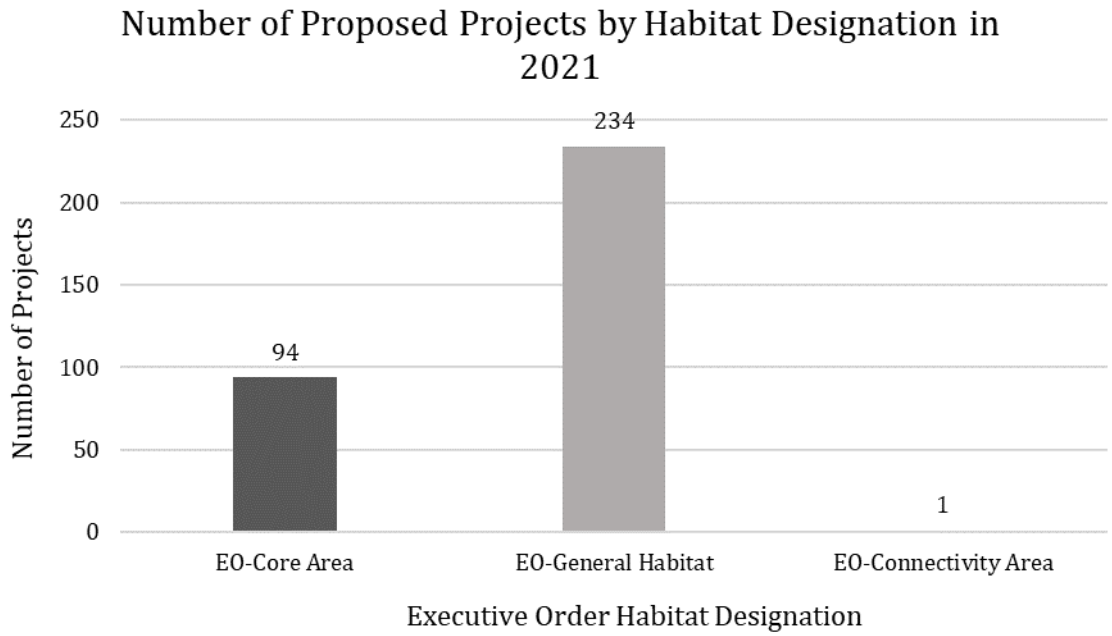

Figure 3. Of the 329 projects reviewed by the Program in 2021, 234 projects were located in General Habitat, 94 projects were located in a Core Area, and one project was located in a Connectivity Area.

Review Process Timeline

The Program tracks the review time for each proposed development project once submitted to the Program for review. For purposes of this report, the Active Review Time for a given proposed project is comprised of the number of days the project spends in *Due Diligence* and *Final Review* with the clock stopping once the project transitions to *Completed Review* (Figure 4). Some proposed projects enter the *Returned* or *Information Request* stages, allowing Proponents to submit additional information about their proposed project deemed necessary for the Program to complete the review. The Program tracks the time spent in the *Returned* and *Information Request* stages separately from the Active Review Time.

Of the 329 total projects reviewed by the Program in 2021, 296 projects reached the *Completed Review* or *Concluded* stage by December 31, 2021.

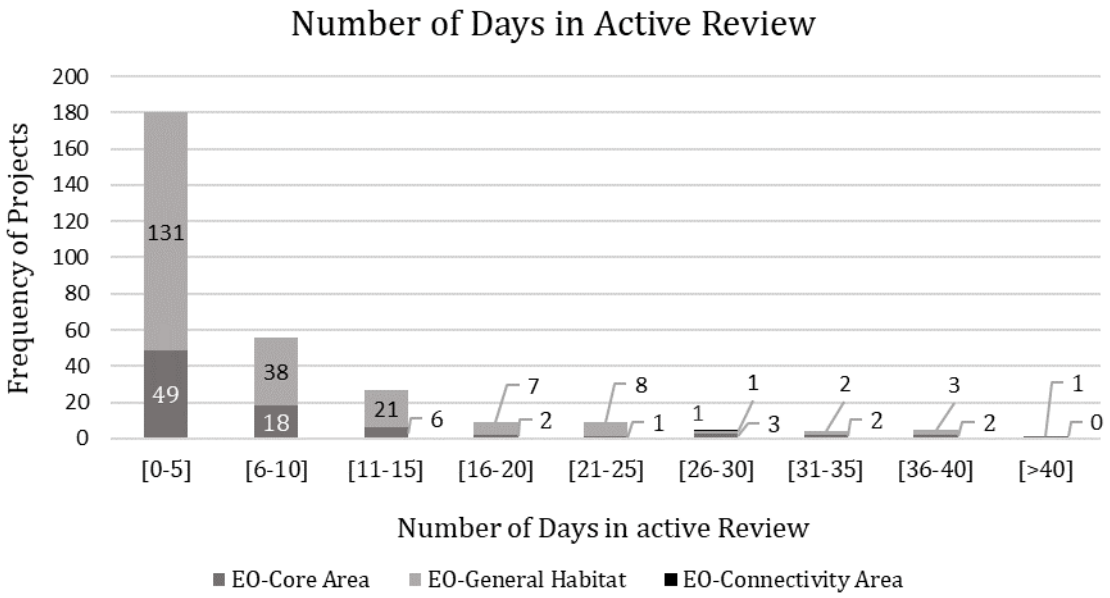

Figure 4. The number of projects that reached Completed Review or Concluded that either were submitted to the Program for review in 2021 (n= 288) or for which review carried over from previous years (n=41) in all designated sage grouse habitat according to the number of days those projects spent in Active Review status (i.e., *Due Diligence*). The Program completed reviews for a total of 296 projects in 2021.

Specific Metrics: Development Projects Reviewed in 2021

This section presents a more detailed consideration of projects for which reviews were completed in 2021. The following discussion focuses on specific categories of Project Types as submitted by proponents through the web application for Program review. All the projects reported in this section attained *Completed Review* or *Concluded* status and received written documentation from the Program by the end of 2021. It also includes projects that were originally submitted for review in previous years and carried forward into 2021.

Project Information by Project Type

The Project Types explicitly discussed in this section represent some of the most common Project Types for which the Program conducts sage grouse consultation reviews. These Project Types include 55 Agriculture – Water projects, 36 Communications projects, 33 Mining projects, and 33 Transportation projects. Additionally, 81 Residential projects were also submitted for review (Figure 5).

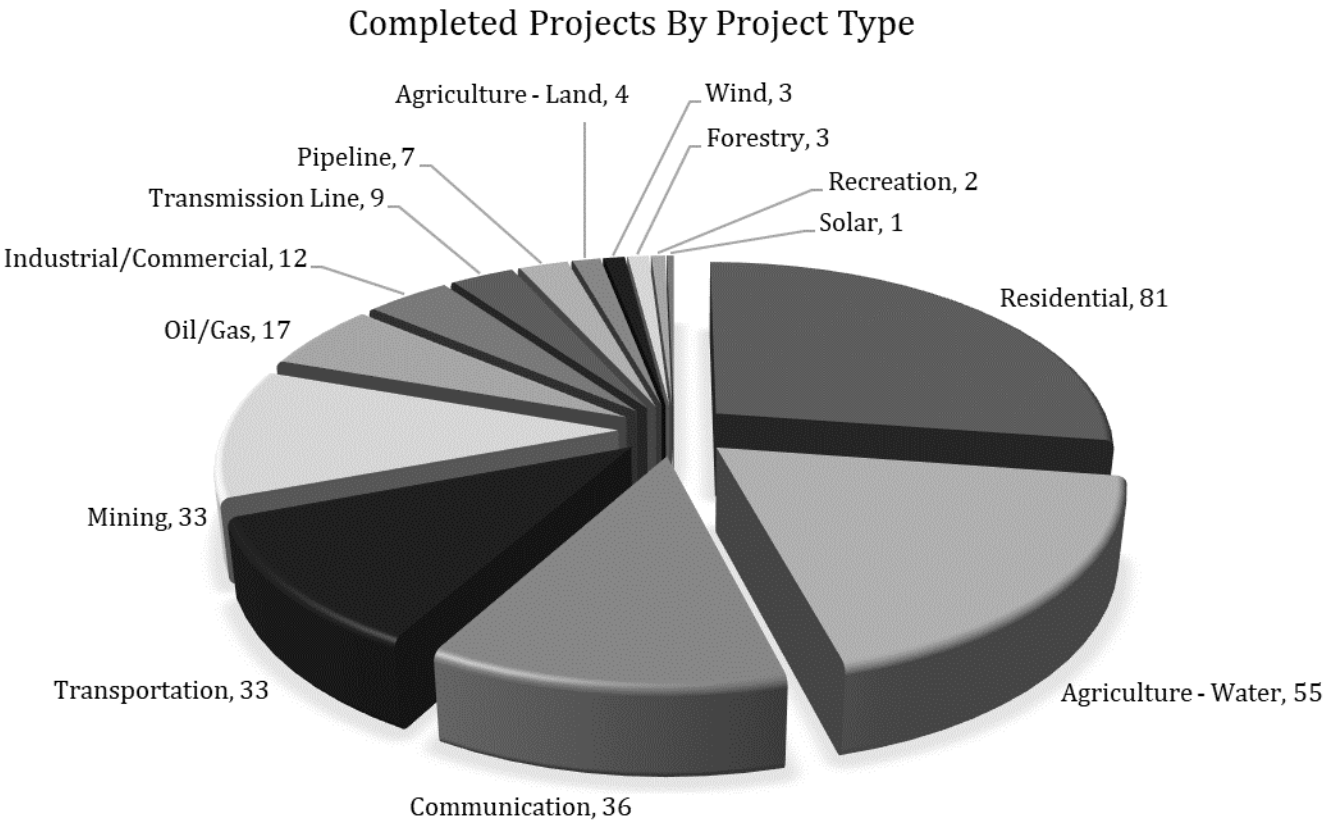

Figure 5. The number of all projects by Project Type for which the Program completed reviews in 2021 (n=296).

Agriculture – Water Projects

During 2021, the Program completed reviews for 55 proposed Agriculture – Water Projects. Approximately 64% of proposed Agriculture – Water Projects were located in General Habitat (n = 35 projects) and 36% were located in a Core Area (n = 20 projects). Overall, the majority of Agriculture – Water Projects were located in General Habitat, thereby avoiding some of the highest quality habitat in Core Areas.

Agriculture – Water Projects may encompass a variety of proposed infrastructure and/or activities necessary for project implementation. Some common infrastructure (i.e., Disturbance Types) associated with Agriculture – Water Projects may include Irrigation, Stock Ponds, Stock Tanks, Pipelines, Water Diversions, Water Wells, Power Lines, and Buildings. Most of the proposed Agriculture – Water Projects included Pipelines (e.g., water pipelines), Irrigation, and Stock Tanks.

Infrastructure – Communication Projects

During 2021, the Program completed reviews for 36 proposed Infrastructure – Communication Projects. Approximately 72% of proposed Communication Projects were located in General Habitat (n=26) and approximately 28% were located in a Core Area (n=10). Communication Projects may encompass a variety of proposed infrastructure necessary for project implementation. Associated

infrastructure may include Towers, Cables, access Roads, Fences, Buildings, Power Lines, and Storage Yards.

Communication Projects vary greatly with their long-term and indirect impacts to sage grouse habitat. While Fiber Optic Cables may be buried and remain underground for many years, their aboveground disturbance is short-term. In this aspect, Communication Projects proposing to bury Fiber Optic Cables (or other types of utilities) decrease the potential indirect impact by shortening or eliminating any long-term aboveground disturbance. Comparatively, Tall Structures present a unique set of long-term direct and indirect impacts on sage grouse habitat. While cell towers occupy a relatively small physical space on the ground, they provide long-term direct and large-ranging indirect impacts due to their height and persistence on the landscape.

Infrastructure – Transportation Projects

During 2021, the Program completed reviews for 33 proposed Infrastructure – Transportation Projects. Approximately 61% of the proposed Transportation Projects were located in General Habitat (n = 20 projects), 36% were located in a Core Area (n = 12 projects), and 3% were located in a Connectivity Area (n= 1 project).

Transportation Projects may encompass a variety of proposed infrastructure and activities necessary for project implementation. Associated infrastructure may include Airport Radio Towers, Airport Runways, Borrow Pits, Bridges, Buildings, Culverts, Interstate Highways, Parking Areas, Pipelines, Railroad Mainlines, Railroad Spurs, Roads, and Storage Yards.

Mining Projects

During 2021, the Program completed reviews for 33 proposed Mining Projects. Approximately 73% of the proposed Mining Projects were located in General Habitat (n = 24 projects) and 27% were located a Core Area (n = 9 projects). Therefore, of the Mining Projects proposed in sage grouse habitat, most were located in General Habitat, thereby avoiding some of the highest quality sage grouse habitat in Core Areas.

Mining Projects may encompass a variety of proposed infrastructure necessary for project implementation. Associated infrastructure for Mining Projects may include Buildings, Core Holes, Fences, Gravel Pits, Mines, Monitoring Wells, Pipelines, Ponds, Power Lines, Power Plants, Railroads, Roads, Shafts, Storage Yards, Stormwater Discharge Outlet Pipes, Trenches, Waste Rock / Tailings / Overburden, and Water Wells. The majority of the proposed Mining Projects included Core Holes, access Roads, Trenches, and Gravel Pits.

MITIGATION: BALANCING CONSERVATION AND DEVELOPMENT

Key Elements in Montana's Mitigation System

Mitigation is one tool, among many, included in Montana's conservation toolbox. When mitigation is timely and effective, habitat loss and fragmentation due to development is offset so that the quantity and quality of habitat for sage grouse is at least maintained. This goal is complimentary to goals and objectives set forth in the Bureau of Land Management (BLM) and United States Forest Service (USFS) land use plans, respectively.

Montana's Mitigation System is derived from and informed by both state and federal guidance. This Mitigation System incentivizes voluntary conservation activity to increase the quantity and quality of sage grouse habitat while simultaneously incentivizing conservation by project developers through implementation of the mitigation hierarchy where impacts are offset (Figure 6). Implementation of the full mitigation hierarchy (avoidance, minimization, reclamation, and compensation using a systematic approach) directly and effectively addresses the threat of habitat loss, degradation, and fragmentation while at the same time allowing development and economic activity in Montana's sage grouse habitats.

A mitigation marketplace provides a platform where conservation actors and developers exchange credits and debits based on free market principles and in ways that incentivize voluntary conservation. Developers are incentivized to keep mitigation obligations as low as possible, which is accomplished by thoughtful project siting and implementation to avoid high quality habitats and steer towards areas of existing surface disturbance, along with implementing the development project as consistently with EO 12-2015 as possible. Credit providers are incentivized to create the greatest number of credits possible per physical area for the expenditures incurred, which is accomplished by focusing their attention on high quality habitats with minimal to no existing surface disturbance or focused restoration efforts in low-quality areas.

The following sections provide a high-level overview of key elements in Montana's mitigation framework. Full details about the elements are available in the MSGOT-approved Habitat Quantification Tool Technical Manual and the Policy Guidance documents. Data specific to the following key elements is presented for calendar year 2021 below.

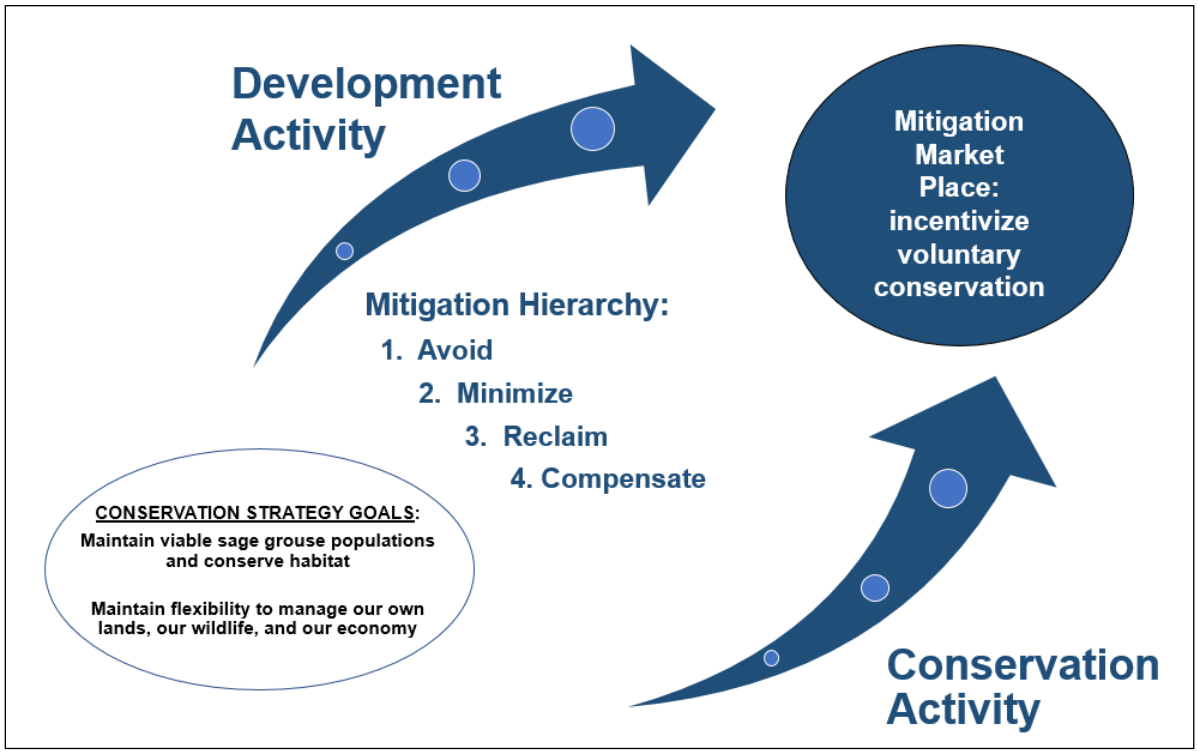

Figure 6. Montana's Mitigation System incentivizes voluntary conservation activity to increase the quantity and quality of sage grouse habitat while simultaneously incentivizing conservation by project developers through implementation of the mitigation hierarchy where impacts are offset

and by private landowners who can benefit by providing mitigation opportunities to developers. A mitigation marketplace provides a platform where conservation actors and developers exchange credits and debits based on free market principles.

The Habitat Quantification Tool: Quantifying Functional Habitat Gains and Losses

The purpose of the Habitat Quantification Tool (HQT) is to evaluate the habitat and anthropogenic variables related to the quality and quantity of sage grouse habitat and to quantify and eventually calculate the value of credits and debits. The HQT considers the biophysical attributes of sage grouse habitats and existing anthropogenic disturbance to provide an objective measure of habitat function. HQT calculations are based on data provided by developers or their consultants or by those considering applying for a Stewardship Account Grant or developing credits on their own. As such, HQT results indicate the number of functional acres lost as a result of a new development project or gained as a result of habitat enhancement, restoration, or preservation from a conservation project (Figure 6). Habitat function is quantified using scores ranging in value from 0 (unsuitable) to 100 (optimal). These quantitative measures of habitat function are expressed as functional acres (Raw HQT Score).

These functional acres provide a common "habitat currency" that can be used for both conservation projects that create credits and for development projects that create debits, thereby ensuring an accurate accounting of habitat gains and losses using a consistent unit of measure for each half of the ledger.

The HQT is applied for all debit-producing projects, such as those seeking to undertake a new land use or activity in sage grouse habitat when that proposed activity receives state funding or is subject to state or federal agency review, approval, or authorization. The HQT strictly looks at changes in functional habitat attributed to the direct and indirect impacts of a proposed development project for the length of time it is on the landscape. HQT scores alone help developers locate areas where habitat impacts would be lower because fewer functional acres would be lost over the life of the project, and because fewer functional acres would be lost, mitigation obligations would be lower.

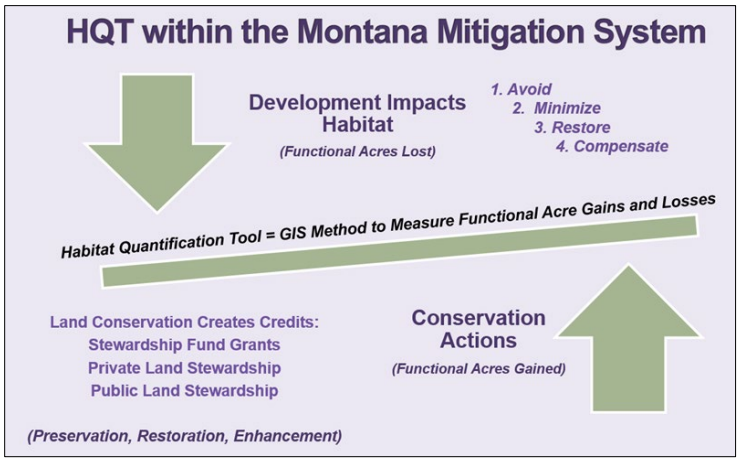

Figure 7. The HQT supports Montana's Mitigation System by providing an objective scientific method for measuring impacts to habitat from development and improvements to or conservation of habitat from conservation actions, with an overarching goal of no net loss, net gain preferred.

Executive Order and Federal Land Use Plan Consistency: Policy and Site-Specific Multipliers

To incentivize consistency with the stipulations set forth in Executive Order 12-2015 or special provisions of federal land use plans, developers are required to obtain additional credits for each deviation from these stipulations or federal plan provision, for the project's duration.

Project developers are encouraged to design and site projects to impact the fewest number of functional acres as possible. Developers can minimize cost and minimize their mitigation obligations by designing and implementing projects having the lowest HQT scores of all alternatives considered.

To create those incentives, Montana's Mitigation System incorporates both policy and site-specific multipliers. These multipliers are based on the Raw HQT score to incentivize conservation, consistency with Executive Order 12-2015, and ensure mitigation is timely and effective. Applying multipliers to the Raw HQT Score provides clear policy signals to incentivize voluntary actions which conserve habitat and cause the least amount of impact. The total mitigation obligation is determined after applying these multipliers.

The following policy multipliers are applied, uniquely and as appropriate to each development project, using a mathematical percentage of the Raw HQT Score:

- Reserve Account: A shared pool of credits to replace credits lost or impaired through unforeseen events such as wildfire (i.e., unavoidable loss or force majeure or "Acts of God"). Because this risk is shared among all participants in the Mitigation System, it is applied to all development projects since the Reserve Account functions as a common insurance pool, so credits can timely replace lost credits. This helps ensure against the potential failure of projects due to unavoidable causes and ensures that no single Mitigation System participant is singularly and overly affected. Twenty percent of the Raw HQT Score is calculated.

- Advanced Payment: Applied if the developer does not want to undertake permittee responsible mitigation actions of their own accord and instead make a contribution to the Stewardship Account. While offering flexibility to the developer, advance payments transfer the responsibility to secure adequate compensatory mitigation to the State, through MSGOT and the Program and/or federal agencies. Ten percent of the total Raw HQT Score (functional acres lost) is calculated and applied to reflect the direct and indirect impacts for the life of the project. Stewardship Account contributions are based on the average cost of credits that would otherwise be required. These funds are used by MSGOT to then award Stewardship Account grants so grant recipients can undertake conservation projects to restore, enhance, or preserve habitat, thereby creating credits for offsetting the impacts of development projects. Thus, the Advanced Payment multiplier incentivizes developers to implement their own permittee responsible projects so that mitigation is timely and implemented prior to implementation, rather than implemented by a successful Stewardship Account grant applicant at some point in the future.

- Federal Net Gain: Applied to development project that would be implemented in BLM-designated habitat to ensure BLM is authorizing activities in conformance and consistent with requirements of the 2015 BLM land use plans or plan amendments. Federal Net Gain is calculated as 10% of the Raw HQT Score.

- Site-specific Multipliers: The Mitigation System Policy Guidance v1.0 October 2018 (Policy) outlines specific multipliers to incentivize consistency with the stipulations set forth in Executive Order 12-2015. Developers are afforded full discretion to develop and implement their projects to be consistent with the Order, or not. Consistency with the Executive Order is reviewed independently from the HQT. Consistency is incentivized through the absence of additional multipliers when determining the final mitigation outcome. Developers have maximum flexibility to design, construct, and implement projects to avoid as many site-specific deviations from the Order's stipulations during each project phase as possible.

  Stipulations include limitations on new surface disturbance in Core Areas beyond 5% of the level of current disturbance, surface occupancy near active leks, noise, time-of-day, and seasonal use near active leks and within breeding, nesting, and early brood-rearing habitat, as well as siting and design requirements for specific Project Types or surface disturbance types.

  Site-specific multipliers for deviations from EO 12-2015 stipulations are calculated as 10% in Core Areas and 5% in both General Habitat and Connectivity Areas in keeping with the fact that Core Areas are Montana's highest conservation priority areas.

- New Functional Acre Multiplier: Conservation activities that restore or enhance sage grouse habitat are incentivized by adding an additional 10% to the Raw HQT Score. Restoration or enhancement projects can create new habitat "uplift" or create new functional acres for the project area which didn't exist prior to the restoration or enhancement activity, which contrasts with preservation of existing habitat.

Debits vs. Credits: What's the Difference?

The Stewardship Act's mitigation and Stewardship Account provisions work in concert to balance conservation and development in sage grouse habitats. Credits represent the attainment of resource function or habitat through restoration, enhancement, or preservation activities. In contrast, debits represent the loss of resource function caused by development. Credits and debits are both calculated using the same HQT model and the applicable policy multipliers, respectively (Figure 8). The unit of measure is the same for both debits and credits, and there is a 1:1 correspondence. One credit is the market unit equivalent of one debit.

Credits may be produced through grant funding provided by the Stewardship Account, developed under any other MSGOT-approved mechanism (e.g., conservation bank or habitat exchange), or created and used by project developers conducting their own compensatory mitigation projects to offset development impacts (i.e., permittee-responsible mitigation).

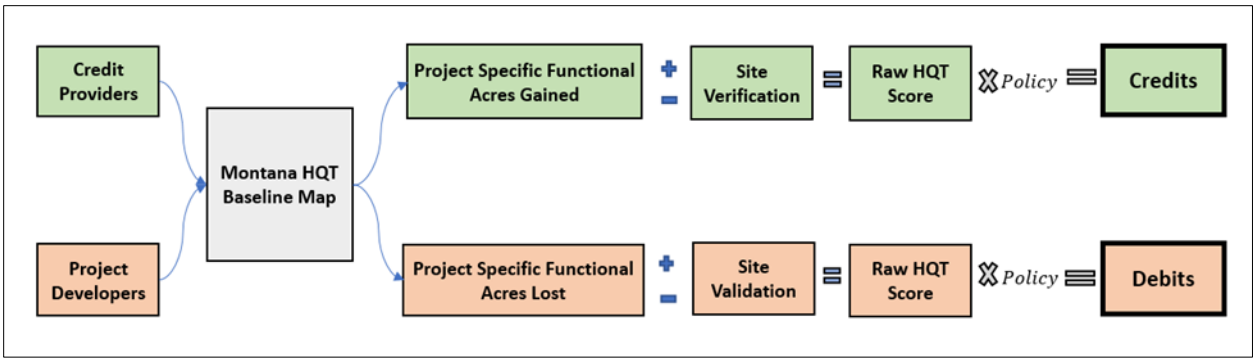

Figure 8. General workflow to determine the number of credits produced by a conservation project (top row in green) or the number of debits attributed to a development project (bottom row in tan) over the life of a given project, respectively. The Raw HQT Score is calculated first, and then applicable multipliers are factored in to determine the final number of credits or debits, respectively.

Mitigation Options for Developers

Currently, a developer has three mitigation options to obtain an equivalent number of credits to offset the final number of debits attributed to their project. These three methods, or any combination of the three, can be used to obtain an equivalent number of credits to offset the debit impacts attributed to development Projects through Montana's Mitigation System:

1. Permittee-Responsible: Creating credits through habitat preservation, restoration, or enhancement activities. The developer is responsible for ensuring that compensatory mitigation activities are completed and successful. The developer works directly with the Program but undertakes all mitigation actions and retains liability and responsibility to ensure offsets are in place for the duration of the permitted activity.

2. Obtain Credits elsewhere: Obtain credits through any other MSGOT-approved mitigation mechanisms and third-party entities. A third–party mechanism has not been established to date.

3. Make a financial contribution to the Stewardship Account: Transfer responsibility to secure adequate compensatory mitigation to MSGOT and the Program through future Stewardship Account grants.

Although the vast majority of developers are likely to choose to make a financial contribution to the Stewardship Account because of its simplicity and expediency, a developer can choose any one of the above options, or any combination, to offset impacts to sage grouse habitat. Calculations can be made proportional to the option selected by the developer.

Service Areas

There are four Service Areas in the Montana Mitigation System (Figure 9): North Central, Central, Southeastern, and Southwestern. Service Areas define the landscape scale geographic area within which an impact at a given location must be mitigated to ensure species-specific habitat needs are met at ecologically relevant scales. The geographic scale at which impacts are offset by mitigation has ecological relevance to sage grouse conservation at the landscape scale within Montana and

regionally. Concurrent consideration should also be given to local scales to ensure that mitigation is spatially relevant and effective for locally impacted leks and sub-populations.

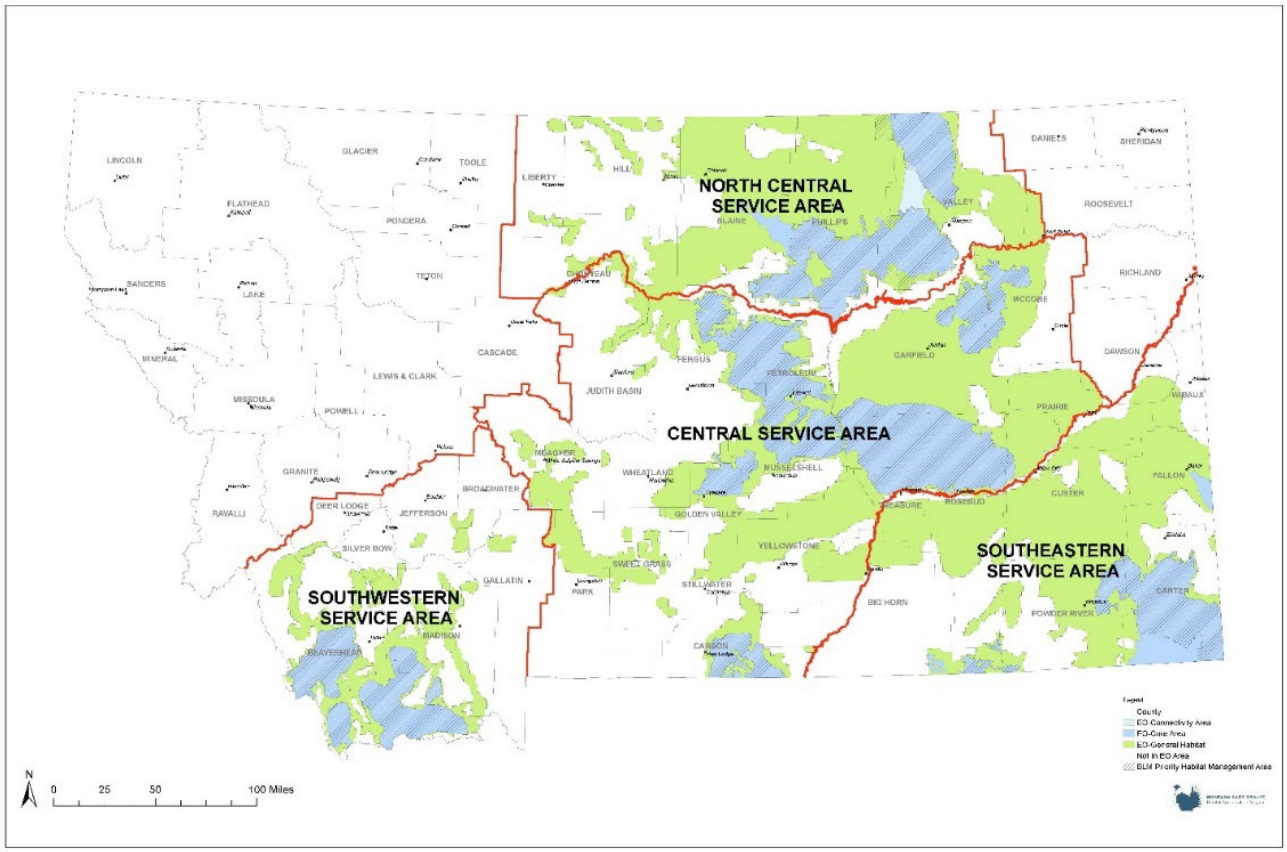

Figure 9. Montana Mitigation System Service Areas. See Appendix 7.3 of the Montana Mitigation System Policy Guidance Document v1.0, October 2018 for more specific boundary descriptions.

Development Project Impacts in Sage Grouse Habitats

Introduction and Context

The Stewardship Act, Executive Order 12-2015, and mitigation work in concert to balance the competing needs of conservation and economic activity/development in designated sage grouse habitats. All new land uses or activities that are subject to state agency review, approval, or authorization are required to avoid, minimize, and reclaim impacts to sage grouse habitat, and to provide compensatory mitigation for any residual effects. The State also provides technical support to BLM and USFS when those agencies are reviewing permit or authorization requests to use or develop public lands.

While there are several project types that require consultation and are subject to mitigation, Executive Order 12-2015 Attachment F provides a list of activities that are exempt from these requirements under certain circumstances. Additionally, MSGOT may approve exceptions to the consultation requirements of Executive Order 12-2015 on a case-by-case basis (e.g., activities requiring permits that would wholly occur within the boundaries of an incorporated municipality).

In addition to the Attachment F and MSGOT-approved exceptions, there are two additional circumstances where the resulting impact due to the implementation of a development project does not require mitigation, for one of two reasons. First, there are instances where a developer has sited a development project so well that the HQT mathematical calculation result is 0.0. This means that the HQT indicates that no functional acres would be lost due to the project, no debits accrue, and there is no mitigation obligation.

Second, there are instances where a development project may produce an HQT result greater than 1.0, but the landscape surrounding the proposed development activity, the -, the project's location, or other facts on the ground indicate that there would be little to no effect on sage grouse habitat or local populations. In these instances, the Program undertakes a more thorough review after the initial HQT result is obtained. Program staff consider the project location and closely examine and consult additional sources of aerial imagery, other GIS data sources, and may solicit local professional opinions. This more detailed analysis is called a desktop analysis. This would be undertaken for development projects proposed in areas that are *already* highly fragmented and disturbed to the extent that they generally have little to no value to sage grouse.

The Program has found that when projects fall into either the first or second set of circumstances, it is usually because the Program is reviewing projects at the site specific, fine scale whereas habitat area boundaries were delineated at a broad, more generalized scale. The Program exercises its best professional judgment, guided by the literature, on a project-by-project basis where the broadly delineated habitats do not account for finer, localized aspects of a project and/or the physical attributes or conditions on the ground.

It is important to note that even when a project falls into one of the above categories (i.e., exempt, zero HQT result, or desktop analysis) and no mitigation is required of the developer, surface disturbance may still occur. Even in these cases, the information and data are still tracked and reported below.

Lastly, there is uncertainty around when a development project would be implemented in the future. It is known that developers sometimes delay or cancel projects altogether after the Program completes a review of the proposal. Therefore, the data presented below represent *anticipated and assumed* impacts on the landscape and sage grouse habitat in Montana using the Program's best available information. The assumption is made that the project will be implemented because developers have, of their own accord, initiated the consultation process with the Program. The Program will endeavor to confirm whether development projects were actually implemented and anticipates refining the data in future reports.

The sections below summarize functional acres lost as calculated using the HQT, debits accrued through policy and site-specific multipliers, total debits, methods developers selected to fulfill a mitigation obligation, and contributions to the Stewardship Account by developers who chose that option.

Functional Acres Lost

Functional acres lost are calculated using the HQT. The HQT is based on standardized data and used to quantify losses of functional habitat using a consistent, quantitative approach. The number of functional acres lost depends on: (1) the project location; (2) the underlying habitat quality both in the direct footprint and indirect impact area; (3) the project type; (4) the project size; (5) project

complexity; (6) whether the project is located on existing anthropogenic disturbance; and (7) project duration (i.e., how long the project will exist on the landscape).

2021 Project Statistics

Functional Acres

Data Preparation

Of the 329 projects the Program reviewed in 2021, 296 projects reached *Completed Review* or *Concluded* status by December 31, 2021. Of these 296 projects, an HQT calculation was performed for 76 projects. An HQT calculation was not conducted on the remaining 220 projects (i.e., projects were exempt per Executive Order 12-2015, grandfathered, residential homes, or projects did not require any additional surface disturbance or change in activity).

The data in this section includes all projects for which an HQT calculation was performed in 2021 (n=76) to estimate the total number of functional acres lost. A mitigation obligation may or may not have been incurred. This is because the project: (1) had an HQT mathematical result of zero functional acres lost (i.e., zero debits; n=2) or (2) a desktop analysis was conducted (n=19) and no mitigation was assessed to the developer.

This section includes two projects that entered *Due Diligence* in 2019 and 13 projects that entered *Due Diligence* in 2020 and reached *Completed Review* in 2021. The remaining 61 projects entered *Due Diligence* and reached *Completed Review* in 2021.[4]

Results: Sum of Functional Acres Lost

In 2021, the Program completed reviews for 296 proposed development projects. Of those 296 projects, the Program performed HQT calculations for 76 projects (26%). Of the 76 projects for which an HQT was calculated, only 55 projects incurred a final mitigation obligation (72%). The remaining development projects did not trigger a mitigation requirement (n=21; 28%).

Of the 76 projects for which an HQT was calculated, two projects had a mathematical result of zero (3%). This means that the project was located within the boundaries of existing disturbance and no new functional acres would be lost if the project were implemented. A total of 19 projects were subjected to detailed desktop analysis. For these 19 projects (25%), no mitigation was required.

In 2021, a total of 425,654 functional acres were lost due to the implementation of development Projects across all Service Areas (n=76 projects). This number takes into account all development projects for which an HQT calculation was performed and that reached *Completed Review* or *Concluded* status by December 31, 2021 (n = 76 projects).

Of the 425,654 functional acres lost, 269,766 were attributed to projects located in a Core Area (63%) and 155,888 were attributed to projects located in General Habitat (37%). No functional acres were lost due to the implementation of projects in the Connectivity Area.

[4] Two projects originally entered *Due Diligence* and reached *Completed Review* in 2019. Details about these projects changed in 2020 and required adjustments to the Program's review. They were moved back into *Due Diligence* and reached *Completed Review* in 2021. Thirteen additional projects entered *Due Diligence* in 2020 and did not reach *Completed Review* until 2021.

The greatest loss of functional acres in 2021 occurred in the Central Service Area, totaling 411,040 (97%) (Figure 10). The remaining functional acres lost in 2021 were attributed to approximately 2% in the Southeastern Service Area (9,969), 1% in the Southwestern Service Area (3,383), and <1% in the North Central Service Area (1,262).

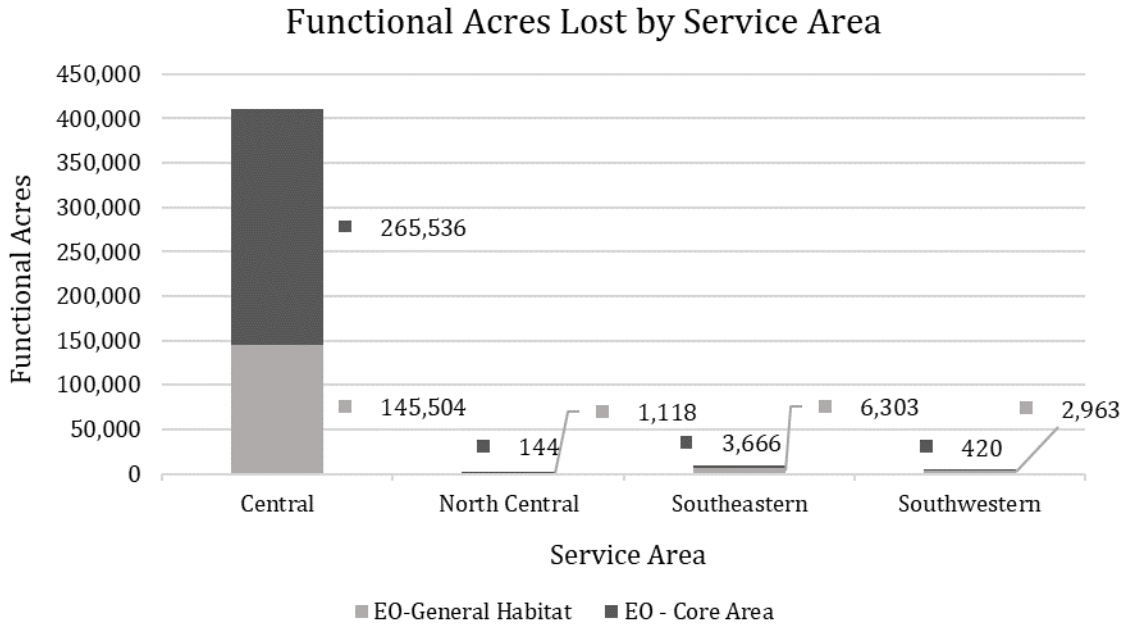

Figure 10. Number of functional acres lost by Service Area and EO habitat designation across all development projects for which an HQT calculation was performed and reached *Completed Review* or *Concluded* status by December 31, 2021 (n=76).

Policy Multipliers and Site-Specific Multipliers

Data Preparation Methods to Determine Debits Related to Policy and Site-Specific Multipliers

The following results are based on the 76 development projects for which an HQT calculation was performed, and the Program completed the review between January 1, 2021, and December 31, 2021. This includes projects for which the mitigation obligation was revised to zero after a more thorough desktop analysis.

Policy and Site-Specific multipliers were tallied individually and summed by Service Area. Totals were also determined at the statewide level.

Results: Debits Associated with Policy and Site-Specific Multipliers

On a statewide basis across all Service Areas, a total of 464,288 debits were attributed to the combination of policy and site-specific multipliers applied across all 76 projects (Table 2). A total of 85,135 debits were attributed to the Reserve Account multiplier (Figure 11) and a total of 42,151 debits were attributed to the Advanced Payment multiplier.

Statewide, less than 1% of the total multiplier debits were attributed to the BLM requirement for Net Conservation Gain multiplier (477 debits).

Of the site-specific multipliers, the Seasonal Use multiplier was the most common deviation of any stipulation in EO 12-2015. Among all 76 projects in this subset of data, 92% of the total site-specific multiplier debits (310,233 of 337,002 attributed to site-specific multipliers) were accrued as a result of project activities being implemented or constructed and operational on the landscape between March 15 – July 15 within specified distances of active sage grouse leks.

Table 2. The number of debits attributed to each of the above policy and site-specific multipliers for projects which reached *Completed Review* or *Concluded* status between January 1 to December 31, 2021.

Multiplier	Service Areas				
	Central	North Central	Southeastern	Southwestern	Statewide
Reserve Account	82,210	253	1,994	678	85,135
Advanced Payment	40,777	87	976	311	42,151
Federal Net Conservation Gain	215	1	15	246	477
DDCT	185	0	356	0	541
NSO	23,809	0	0	0	23,809
Seasonal Use	309,997	59	177	0	310,233
Vegetation Removal	1,941	0	1	0	1,942
Noise	0	0	0	0	0
Oil/Gas 1:640	0	0	0	0	0
Total Multipliers by Service Area	**459,134**	**400**	**3,519**	**1,235**	**464,288**

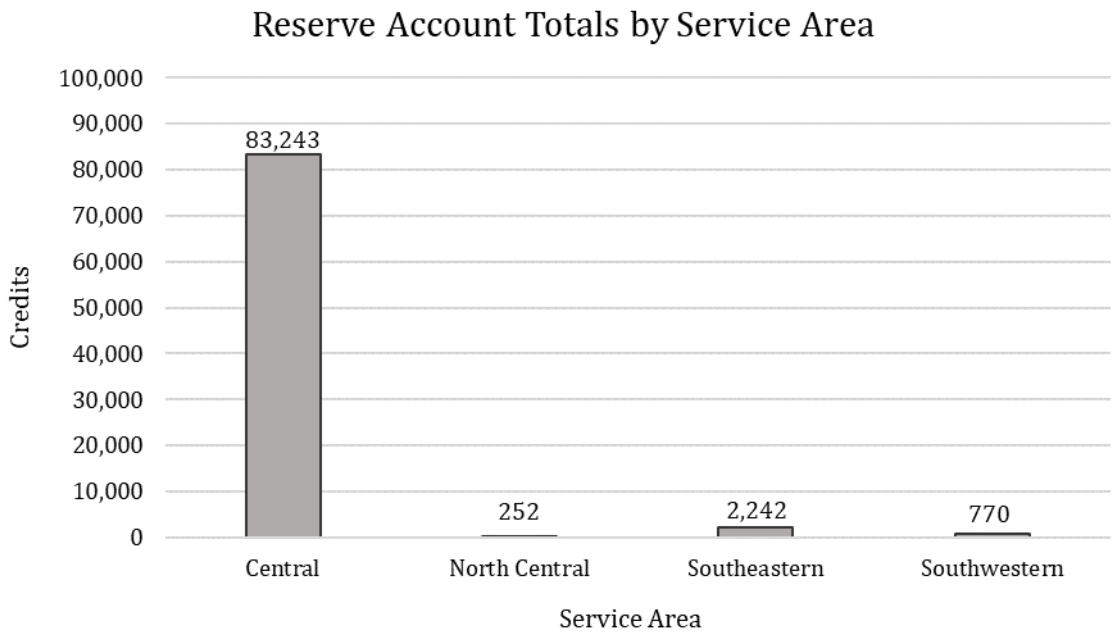

Figure 11. Totals for the Reserve Account Multiplier across all four Service Areas.

Total Debits

Data Preparation Methods for Total Debits

The following results are based on 76 development projects for which an HQT calculation was performed, and the Program completed the review between January 1, 2021, and December 31, 2021.

The total debits data summary reported below includes debits attributed to projects that had a desktop analysis occur. However, these debits did not result in mitigation incurred by the proponent for those projects. The Program assumes the project was still implemented and some disturbance occurred.

The total debits data summary does not include debits attributed to either the Reserve Account or Advanced Payment multipliers. These are policy multipliers that determine the number of credits set aside in an insurance pool and the amount of funds to set aside as an administrative fee. These debits do not represent realized impacts on the ground or functional acres lost that require a mitigation offset.

Total debits were summed and reported by Service Area and habitat category. Total debits were also analyzed and reported according to the major project types listed in Table 1, above. Note that each project may include one or more of a variety of individual disturbance types.

Results: Total Debits

In 2021, there were a total of 762,659 debits created by development projects for which mitigation was applicable and that reached either *Completed Review* or *Concluded* status by December 31, 2021 (n=76 projects). The total number of debits reflects the total number of functional acres lost and all applicable multipliers[5].

Of the 296 projects that reached *Completed Review* by December 31, 2021, only 76 projects were subject to an HQT calculation. An HQT calculation was not conducted on the remaining 220 projects (i.e., projects were exempt per Executive Order 12-2015, MSGOT policy, statutory exemption, grandfathered, residential homes, or projects did not require any additional surface disturbance).

The total number of debits attributed to projects within each Service Area was highly variable. The differences do not correspond with the number of projects located in each Service Area. Instead, they generally correspond with spatial extent and complexity of the projects located within each Service Area and the underlying habitat quality where the projects are located. More total debits would be expected in Service Areas having projects with a larger total impact to the surrounding habitat and at locations where the underlying habitat quality is higher.

A total of 747,187 debits were attributed to projects located in the Central Service Area (98%; n=32 projects). The remaining 15,472 debits were attributed to Projects in the three remaining Service Areas (10,518 in the Southeastern/n=15, 3,631 in the Southwestern/n=13, and 1,323 in the North Central/n=16). See Figure 12.

[5] Does not include debits attributed to either the Reserve Account or Advanced Payment multipliers.

Of the 747,187 total debits, 606,489 debits were attributed to projects located in a Core Area (80%) and 156,170 debits were attributed to projects located in General Habitat (20%). See Figure 12.

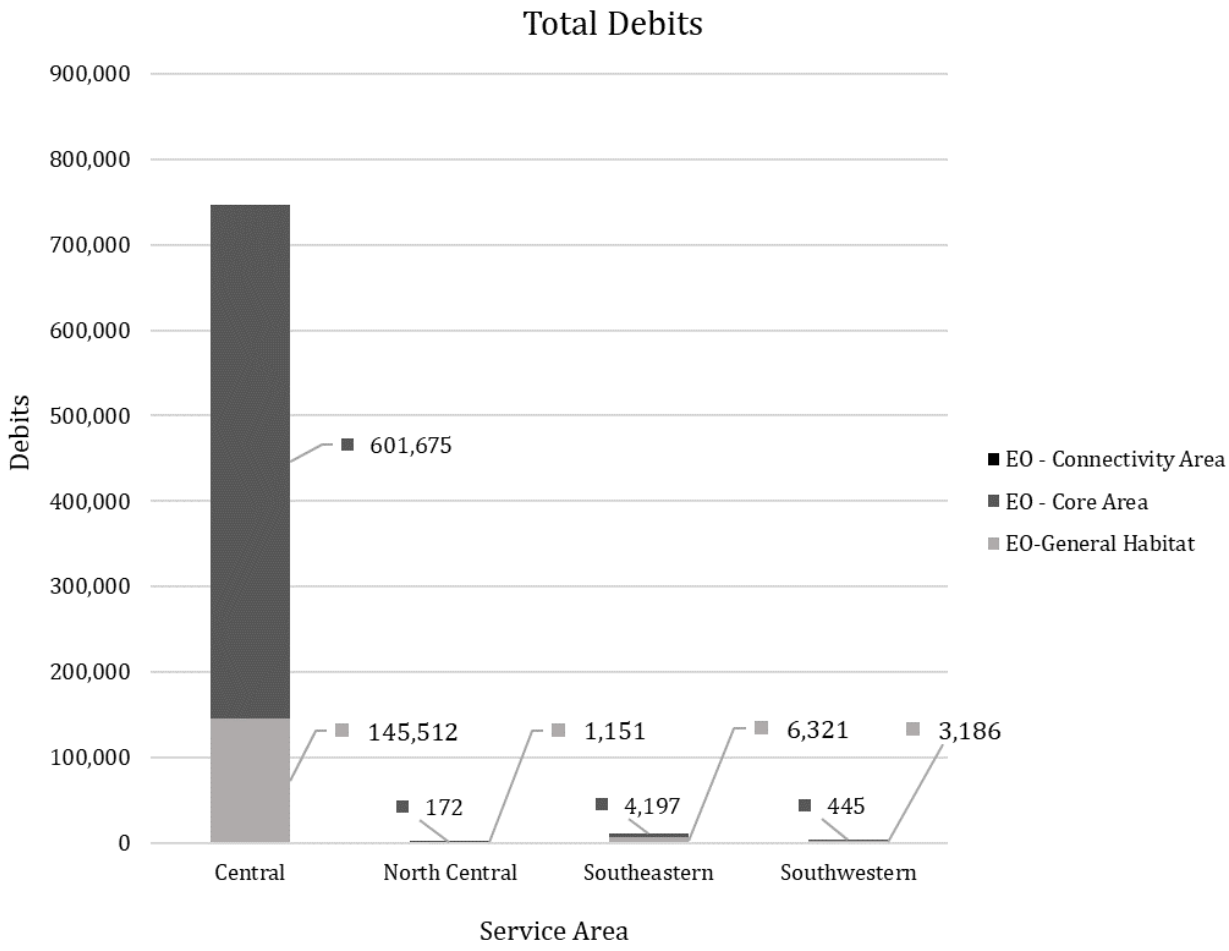

Figure 12. Total number of debits created by Service Area and EO habitat designation for projects for which an HQT was calculated (n=76), with either *Completed Review* or *Concluded* status by December 31, 2021. Totals reflect the functional acres lost due to the project for its entire duration, along with any applicable multipliers.

Results: Total Debits Created by Development Project Type

Major project type categories are listed in Table 1, above. The following summary includes the total debits accrued across all project types in 2021. Of the total 762,659 debits accrued in 2021, 722,353 debits attributed to one Wind project, making up approximately 95% of the total debits across all project types. A total of 40,306 debits were attributed to all other project types in 2021.

Of the remaining 40,306 debits created by all other projects statewide in 2021, Infrastructure – Transportation projects were the main contributors of the total debits created (13,690 debits; 34%). Mining projects attributed approximately 17% (6,968 debits) and Transmission Line projects attributed to approximately 16% (6,251 debits). The remaining 13,397 debits were attributed to a variety of other project types, as seen below in Figure 13.

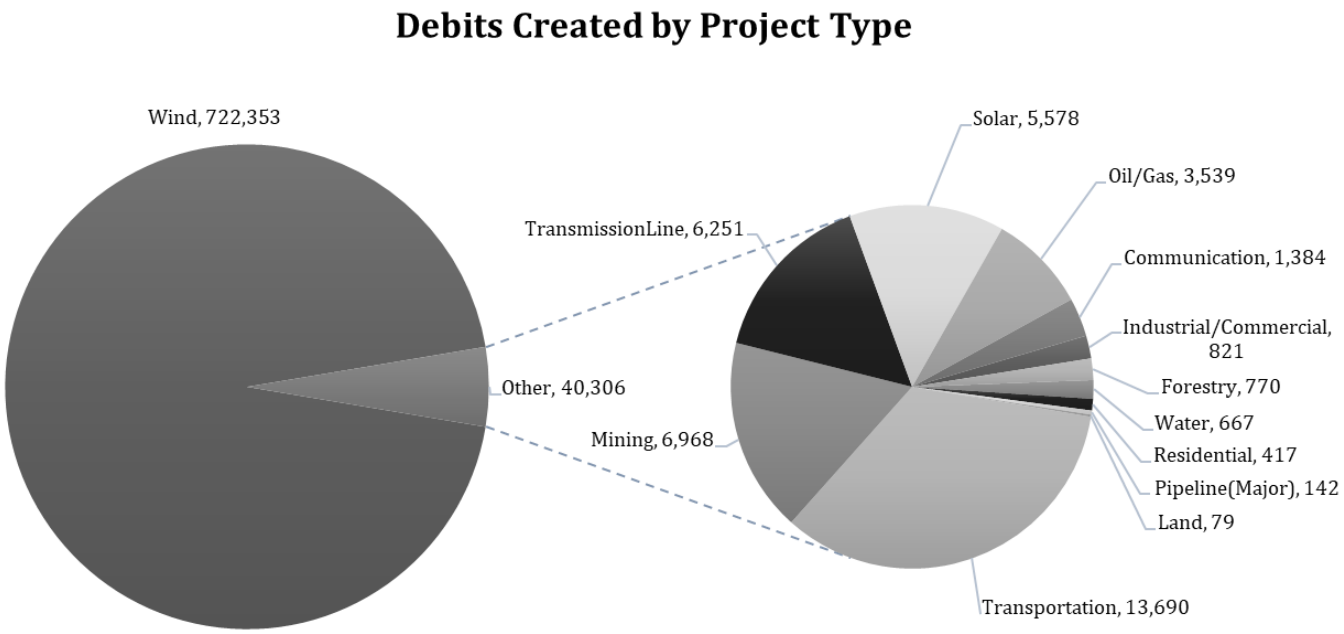

Figure 13. Debits created by Project Type for projects that were assessed mitigation, with *Completed Review* or *Concluded* status from January 1 to December 31, 2021.

Within each individual project type category, the number of total debits accrued can be highly variable from project to project. This is due to several major factors, including: (1) project location - where the project and all of the individual disturbances are sited (i.e., highly functional generally pristine habitat vs. low functioning, disturbed habitat); (2) the number of individual new disturbances necessary to implement the project (i.e., using existing roads vs. building new roads); (3) project size (i.e., larger direct footprint vs. smaller direct footprint); (4) project duration; (5) whether disturbances are above or below ground; and (6) when and how the project is implemented and consistency with Executive Order 12-2015 provisions.

For each project type category, the total debits summed for all projects within that category is shown in Table 3. The average total debits per project are also shown.

Table 3. Total debits categorized by major project type and the average number of debits per project for that project type, respectively.

Project Types	Total Debits	Median	Average Debits
Communications (n=10)	1,384	46	138
Forestry (n=3)	770	189	257
Industrial/Commercial (n=9)	821	35	91
Land (n=1)	79	79	79
Mining (n=26)	6,968	46	268
Oil/Gas (n=11)	3,539	114	322
Pipeline (n=3)	142	29	47
Residential/Subdivision (n=2)	417	209	209
Solar (n=1)	5,578	5,578	5,578
Transmission Line (n=5)	6,251	334	1,250
Transportation (n=2)	13,690	6,845	6,845
Water (n=2)	667	334	334
Wind (n=1)	722,353	722,353	722,353

Mitigation Option Selected by Developers

At this time a developer has two mitigation mechanisms or options available to offset the impacts of their projects (see Key Elements in Montana's Mitigation System section above). A developer can choose any one of the options or a combination. The following section summarizes how developers decided to offset impacts (total debits) in 2021.

Data Preparation Methods for Mitigation Options

The following results are based on 76 development projects for which an HQT calculation was performed, and the Program completed the review between January 1, and December 31, 2021.

Results: Mitigation Option Selected

In 2021, HQT calculations were performed for 76 projects. Of those 76 projects, 21 projects did not result in a mitigation obligation owed by the developer. This is because the project: (1) had an HQT mathematical result of zero functional acres lost (i.e., zero debits; n=2) or (2) a desktop analysis was conducted (n=19) and no mitigation was assessed to the developer.

Of the remaining 55 projects, developers are given complete discretion to choose how to offset their impacts. In 2021, 52 developers elected to offset the impacts of their project and fulfill the mitigation obligation by contributing to the Stewardship Account (95%). See Figure 14 below.

Alternatively, a permittee-responsible mechanism (hereafter, PRM) was selected for three development projects (5%). These three projects are attributed to one developer utilizing PRM credit projects that were put into place in 2018 and 2019, to offset their own subsequent development projects. In other words, this developer created their own PRM pool of credits for their own use to offset their subsequent development projects. See Figure 14. Permittee-

responsible mitigation is tracked as credit, separately from mitigation paid through the Stewardship Account.

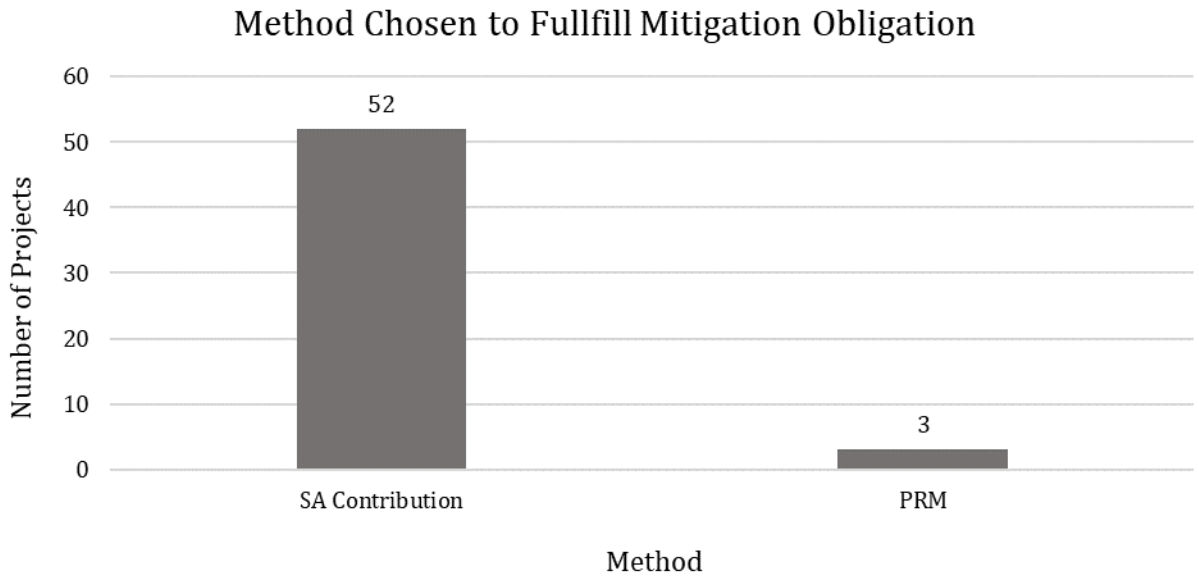

Figure 14. The mitigation method chosen by proponents for 55 projects that reached *Completed Review* or *Concluded* in 2021 and resulted in a mitigation obligation. Twenty-one additional projects are not included in this graph because no mitigation was ultimately required from the developer because the HQT mathematical result was zero (n=2) or the facts surrounding the project warranted revising the obligation to zero (n=19).

Stewardship Account Contributions

Stewardship Account Contributions in Calendar Year 2021

Of the total $6,063,640.67 received through mitigation contributions to date, $4,346,854.18 were deposited into the Stewardship Account during the 2021 reporting period.

Proponents elected to meet their mitigation requirements through a contribution to the Stewardship Account for 52 total projects that reached *Completed Review* or *Concluded* by December 31, 2021. Of these 52 projects, the Stewardship Account had received contributions from 33 of them by December 31, 2021 (63%).

Of the 2021 Account deposits, 97% are attributed to projects located in the Central Service Area ($4,230,716.77), approximately 2% of the total payments were for projects located within the Southeastern Service Area ($96,557.16). Less than 1% were attributed to each of the Southwestern ($12,979.85) and North Central ($6,600.40) Service Areas. See Figures 15 and 16.

Across all Service Areas, approximately 98% of contributions were for projects located in a designated Core Area ($4,239,763.02). Approximately 2% of payments were for projects located in designated General Habitat ($107,091.16).

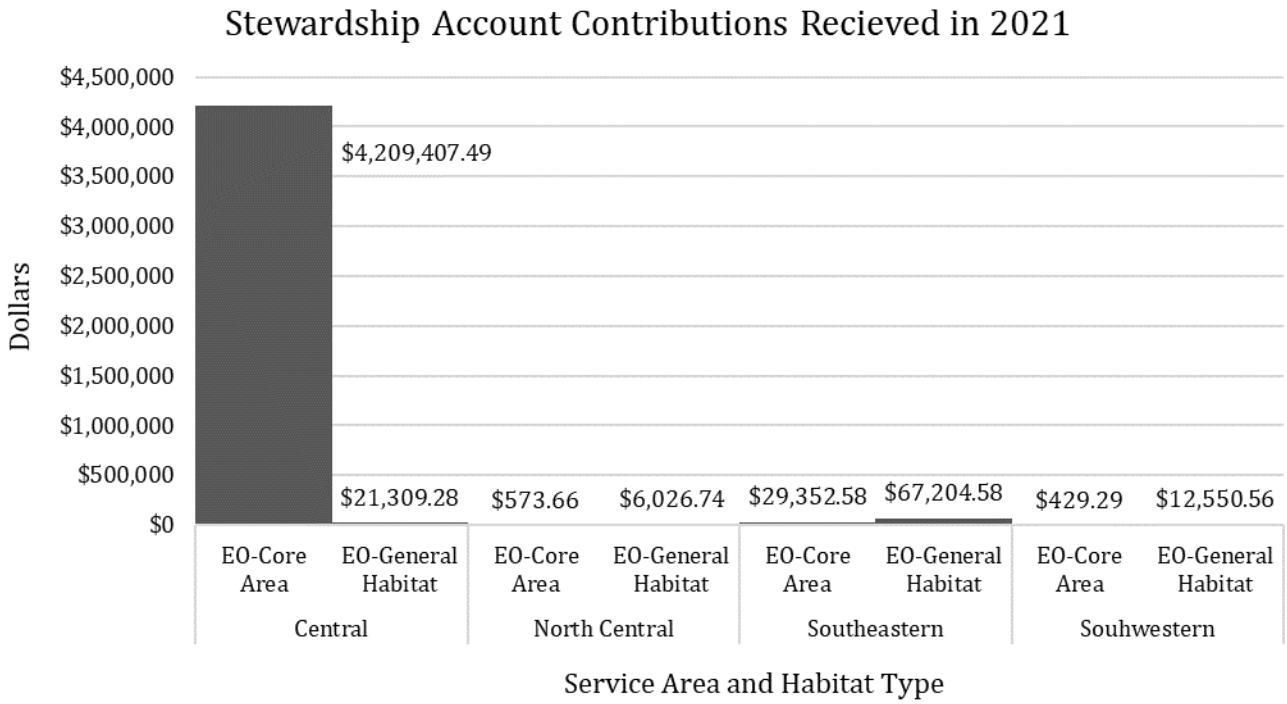

Figure 15. Contributions made to the Stewardship Account between January 1, 2021, and December 31, 2021, according to Service Area and habitat designation.

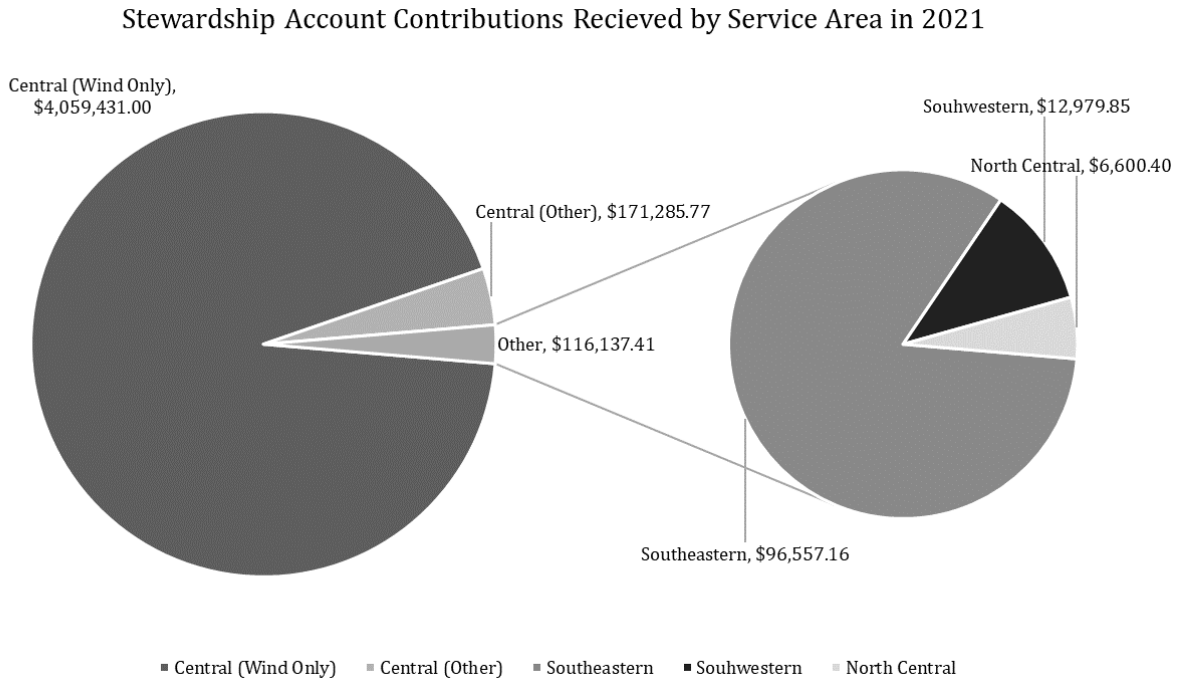

Figure 16. Contributions made to the Stewardship Account between January 1, 2021, and December 31, 2021, according to Service Area and habitat category.

The amount of any single Stewardship Account contribution in the 2021 reporting period varies widely. As with the total debits attributed to major project types listed in Table 1, the contribution amount can vary widely within a project type category. This can be explained by the same factors influencing the total debits calculated for a development project, including that the number of individual disturbances and types included for each individual project varies (even for the same project type), project size, project duration, project location, and the underlying habitat quality. For example, the major project type "Communications" includes individual disturbances ranging from a cell tower to overhead transmission lines, to buried fiber optic lines and new roads. Some Communications projects include all four of those disturbance types, whereas other Communications projects may only entail buried fiber optic lines. Thus, the amount of each Stewardship Contribution varies considerably. See Table 4.

Across all Project Type categories and habitat designations, individual contributions for a single project ranged from a minimum of $4.39 to a maximum of $4,059,431.00 (Table 4). The average contribution was $131,722.85. This number includes the $4,059,431.00 contribution from one wind project. When this Project is removed, the average contribution is $8,981.97, across 32 projects.

Table 4. Median and average contribution amounts deposited into the Stewardship Account between January 1, 2021, and December 31, 2021, by Project Type (n=33).

Project Type	Number of Projects	Median Contribution	Average Contributions
Communication	7	$569.27	$1,760.49
Industrial/Commercial	1	$808.92	$808.92
Mining	12	$1,061.95	$3,910.54
Oil/Gas	7	$1,742.31	$2,355.09
Residential	1	$3,415.96	$3,415.96
Solar	1	$59,737.15	$59,737.15
Transmission Line	1	$4,051.47	$4,051.47
Transportation	2	$71,837.06	$71,837.06
Wind	1	$4,059,431.00	$4,059,431.00
Grand Total	**33**	**$1,445.97**	**$131,722.85**

Summary of Stewardship Account Contributions for All Years

Contributing to the Stewardship Account is an in-lieu fee mechanism if sufficient credits are unavailable through other mechanisms and the developer does not wish to take a PRM approach. Contributions to the Stewardship Account shift the burden to MSGOT to secure an equivalent number of offsetting credits and subtracts those credits from its own balance sheet.

Mitigation obligations, including contributions to the Stewardship Account, should be implemented *after* a developer obtains all necessary permits but *before* the project is implemented and construction starts. This protocol affords developers the flexibility to decide when to initiate the permitting process, to modify a project during the permitting process, to decide on the exact

timeline to implement a project, to delay implementation once permits are obtained, or to cancel the project altogether.

Providing this flexibility to developers to decide when to complete the permitting process and when to make their deposit to the Stewardship Account also creates uncertainty for MSGOT and the Program. Funds only become available to MSGOT and the Program after a contribution is made and recorded, creating an "accounts receivable" delay or an "amount due" inherent in the mitigation system (Figure 17).

Data Preparation Methods

The Program compiled information about the status and disposition of contributions for all projects for all years where the developer selected the Stewardship Account option. Stewardship Account activity is summarized here. Stewardship Account activity beginning in 2018 was compiled because this was when the first deposit into the Account was received. Account activity or expected donation summaries are limited to projects that reached *Completed Review* or *Concluded* by December 31, 2021, the end of the current reporting period.

The disposition and status of a project's Stewardship Account contribution is classified as one of the following:

1. Due – Reviewer Tracking: The developer had selected the Stewardship Account at the time the Program completed its review, but the donation had not yet been received by December 31, 2021. The Program's project reviewers are actively tracking the project for eventual receipt of the funds. These funds are "due" to the Stewardship Account and the deposit is expected at some point in the future.
2. Received: Contributions were received and properly credited to the Stewardship Account.

Results: Stewardship Account Contributions

A total of $6,063,640.67 has been received into the Stewardship Account since 2018 (i.e., Received status; Figure 17).

A total of $420,731.39 is categorized as Due – Reviewer Tracking as of December 31, 2021. For these projects, the Program has completed its review, but the project proponent has either not yet obtained all necessary permits, has delayed the permitting process, or has obtained permits but not yet made the contribution so the project can get underway.

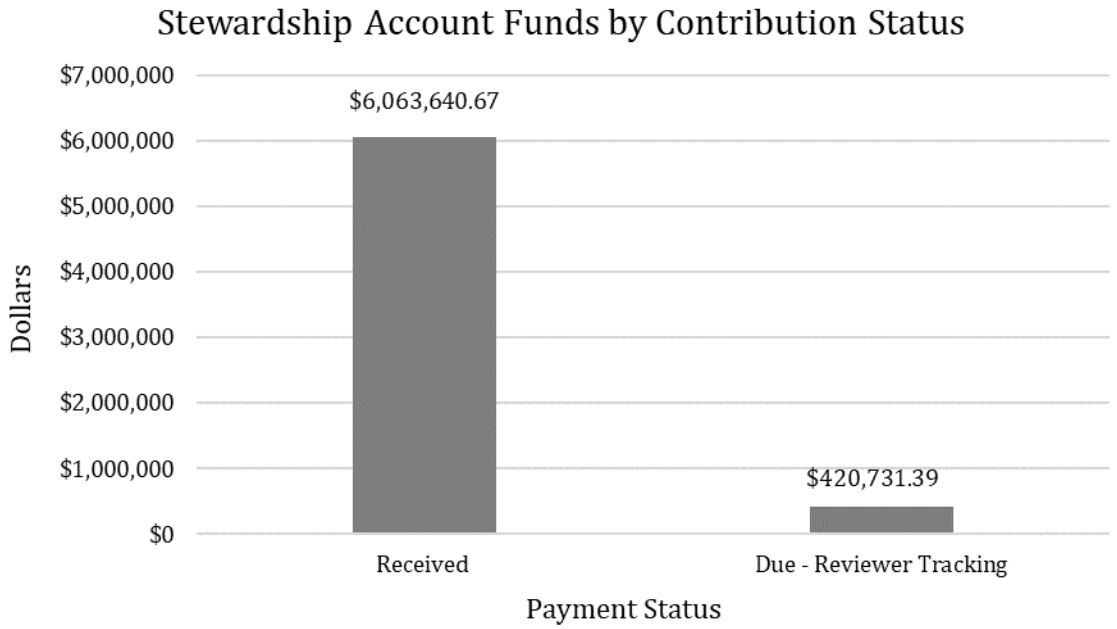

Figure 17. Stewardship Account funds by contribution status across all projects in *Completed Review* or *Concluded* status from 2018 to December 31, 2021.

MSGOT's Stewardship Account Grants to Offset Impacts on Behalf of Developers
Summary of all Grant Cycles

Introduction

The purpose of the Act is to "provide competitive grant funding and establish ongoing free-market mechanisms for voluntary, incentive-based conservation measures that emphasize maintaining, enhancing, restoring, expanding, and benefitting sage grouse habitat and populations on private lands, and public lands as needed." In conjunction with MCA 2-15-243, the Act charges MSGOT with certain duties. The Act also authorizes MSGOT to adopt administrative rules to implement the Act's Stewardship Account grants and mitigation.

In allowing project developers to provide compensatory mitigation through contributions to the Stewardship Account, project developers transfer the obligation to secure an equivalent number of credits to MSGOT. MSGOT then uses the contribution monies to fund credit-creating projects through a competitive grant process.

Overview of Stewardship Account Grants for all Grant Cycles

MSGOT has offered a total of three grant cycles from 2016 to December 31, 2021. The first was in 2016/2017, the second cycle was in 2019, and the third in 2020. Funds awarded were primarily sourced back to the original statutory appropriation of 2015. Of all Stewardship Account contributions received to date, a total of $9,715,815 has been obligated towards grants.

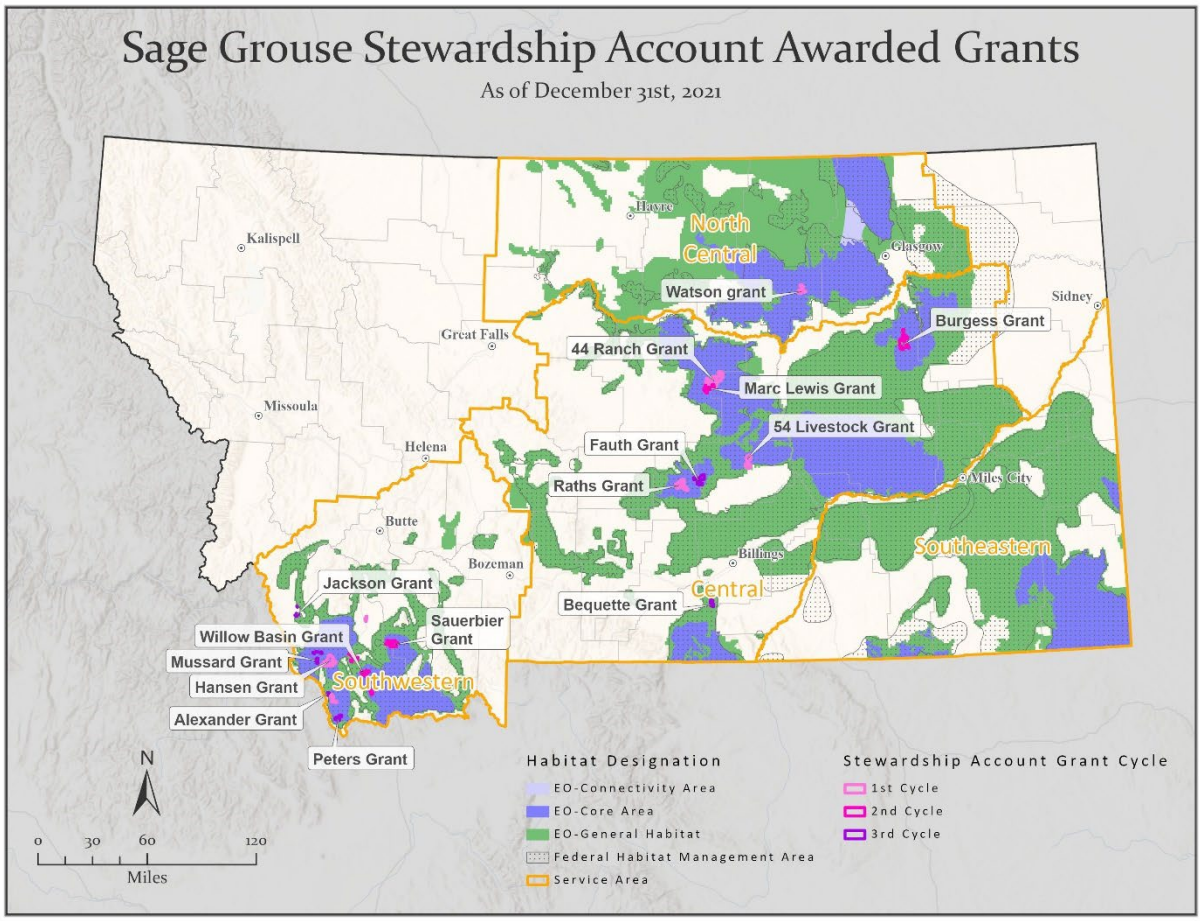

Figure 18. Locations of all Stewardship Account grant proposals that were funded by MSGOT in the first, second and third grant cycles and are still active at the end of 2021. Additional details can be found in the MSGOT Meeting Archive, Audio Summary Minutes, Notes and Handouts.

Status of Stewardship Account Grant Projects Awarded Funding in All Grant Cycles

The Stewardship Act provided an avenue for MSGOT to proactively jumpstart creation of credits through Stewardship Account grants while the Program concurrently worked with stakeholders to develop the mitigation framework and the HQT. MSGOT could not award more than $5 million in grants (or half of the original $10 million appropriation) prior to designating the HQT. Furthermore, once designated, the HQT had to be applied retroactively to calculate the number of credits created through Stewardship Account grants awarded prior to the final HQT designation.

The Program has initiated three grant cycles and funded a total of 15 perpetual conservation easements and one conservation lease across all three cycles. Conservation leases differ from perpetual conservation easements in that conservation leases are for a fixed number of years only, and the landowner decides the number of years or duration of the lease. At the expiration of the term, the lease expires, and the landowner is free to exercise those rights once again.

The status of all grant projects selected for funding across all three cycles as of December 31, 2021, is shown in Table 5. Of the total 19 projects selected for funding, four projects were withdrawn by

the grant applicant, 12 projects have closed, and the remaining three projects are expected to close in 2022.

Table 5. Status of all projects awarded grant funding across all three cycles, as of December 31, 2021.

Proposal	Type	County	Habitat Class	Size (acres)	MSGOT Decision/Status
First Cycle – 2016/2017					
44 Ranch	Perpetual Easement	Petroleum, Fergus	100% Core	18,033	Closed November 2016
Raths Livestock	Perpetual Easement	Golden Valley	100% Core	11,230	Closed February 2019
Watson	Perpetual Easement	Phillips	100% Core	2,833	Closed May 2020
Hansen	Perpetual Easement	Beaverhead	98% Core	13,535	Closed October 2018
Weaver	Perpetual Easement	Choteau, Blaine	100% General	9,870	Withdrawn by grant applicant in May 2018 when other funding source secured
Smith	Perpetual Easement	Beaverhead	100% Core	288	Withdrawn by grant applicant in August 2017 when other funding source secured
Second Cycle - 2019					
Willow Basin	Perpetual Easement	Beaverhead	100% Core	3,989	Closed March 2020
Marc Lewis	Perpetual Easement	Fergus, Petroleum	100% Core	3,743	Closed December 2020
Sauerbier Ranch	Easement	Beaverhead, Madison	100% Core	7,697	Closed March 2021
King Ranch	30-Year Conservation Lease	Petroleum	100% Core	11,703	Withdrawn by grant applicant May 2020 when another funding source was secured
Shultz-Gran Prairie	25-Year Conservation Lease	Petroleum	100% Core	6,367	Withdrawn by grant applicant May 2020 when another funding source was secured
Burgess Ranch	30-Year Conservation Lease	Garfield	80% Core	12,901	Closed April 2020
Third Cycle - 2020					
54 Ranch	Perpetual Easement	Musselshell	60% Core	6,660	Closed April 2021
Alexander Ranch	Perpetual Easement	Beaverhead	99% Core	679	Closing expected in 2022
Bequette Property	Perpetual Easement	Carbon	100% General	2,524	Closing expected in 2022
Fauth Ranch	Perpetual Easement	Musselshell, Golden Valley	100% Core	8,313	Closed December 2021

Jackson Ranch	Perpetual Easement	Beaverhead	100% General	924	Closing expected in 2022
Mussard Ranch	Perpetual Easement	Beaverhead	100% Core	2,436	Closed February 2021
Peters Ranch	Perpetual Easement	Beaverhead	100% Core	3,429	Closed December 2021

Mitigation Credits Created by MSGOT through Stewardship Account Grants by Developers through Permittee-Responsible Projects, and Other Means for All Years

Introduction

Montana recognizes credit projects that avoid future loss or fragmentation of otherwise intact habitat by legally removing identified threats through preservation using perpetual conservation easements or term leases. Preservation credit projects create credits through land preservation using perpetual conservation easements, term easements, or term leases. Long-term, voluntary protection of remaining habitat is the gold standard of habitat conservation in Montana. Montana also recognizes credit projects that restore or enhance habitat through active management (e.g., conifer removal, reseeding). Unlike typical preservation credit sites, restoration or enhancement credit sites increase the quantity or quality of functional habitat at that particular site.

Developing and selling credits in the Mitigation System by preserving, restoring, or enhancing land which increases the functional habitat quality or quantity for sage grouse could generate revenue for the respective landowner. Developing credit sites and participation in the Montana Mitigation System is voluntary on the part of private landowners and Montana State Trust Lands.

Mitigation credits may be produced through grant funding provided by the Stewardship Account (i.e., Stewardship Account Grants), developed under any other MSGOT-approved mitigation mechanism (e.g., conservation bank or habitat exchange), or created and used by project developers conducting their own compensatory mitigation projects to offset development impacts (i.e., permittee responsible mitigation) or by working with third parties to develop credit sites. Funding from the Stewardship Account is not required to create credit sites.

Baseline and Policy Multipliers for Newly Created Uplift from Restoration and Enhancement

Each crediting project must demonstrate additionality. Additionality refers to the requirements that: (1) regulatory – credit-generating habitat benefits from a project must be in addition to what would have happened in the absence of a credit project (baseline before implementation) and in addition to what is already otherwise required by existing law and regulations; and (2) legal and financial commitments.

For permanent credits created through permanent conservation easements, the easement itself satisfies the additionality requirement, but the baseline will be adjusted to account for the fact that absent additional restoration or enhancement activities, perpetual easements preserve the status quo and do not create new functional acre credits. For restoration or enhancement credit sites, a legal site protection instrument permitting or prohibiting certain activities to preserve the integrity of the habitat, respectively, satisfies the additionality requirement.

To more accurately reflect that perpetual conservation easements, in the absence of any additional restoration or enhancement activity, preserve the status quo and do not create new functional acres, Montana defines baseline for perpetual preservation credit projects as 40% of post-project habitat function determined by the HQT as a default. For this reason, the credits produced from the implementation of a preservation project will be approximately 60% less than the Raw HQT score (i.e., functional acres gained).

A positive multiplier is applied to the number of functional acre credits newly produced at a given restoration or enhancement credit site because they increase functional acres above baseline. A positive 10% multiplier is applied for newly produced functional acre credits in a Core Area and a positive 5% multiplier is applied for newly produced functional acre credits in General Habitat.

Functional Acres Gained from Completed Projects: Stewardship Account Grants, and PRM in 2021

Data Preparation Methods

The HQT is also applied to mitigation credit projects. The initial HQT results are referred to as functional acres gained. After applying credit policy modifiers, functional acres are converted to credits (Table 6). The sections below report data for both the functional acres gained and the total number of available and anticipated credits. Functional acres gained data are reported *before* the baseline adjustment and represent the number of functional acres gained due to the implementation of credit projects. Credits are reported *after* applying the baseline adjustment to preservation credits and applying any additional multipliers for newly created credits through restoration or enhancement projects.

Stewardship Account grant projects that had all the necessary paperwork filed with their respective county and "closed" between January 1, 2021, and December 31, 2021, are included (n=5: 54 Ranch Livestock, Fauth Ranch, Mussard Ranch, Peters Ranch and Saurbier). No PRM projects were implemented between January 2021 and December 2021.

In 2021, there were a total of 1,059,696 functional acres gained due to the implementation and closing of credit projects across all Service Areas (i.e., available credits). This number takes into account credit projects submitted through the Stewardship Account Grants (n=5). Each of the five projects included in this section have closed.

The greatest gain of functional acres was seen in the Southwestern Service Area, totaling 717,179 functional acres gained (68%) (Figure 19). Approximately 32% of the total functional acres gained were located in the Central Service Area (342,517 functional acres gained). The Southeastern Service Area and North Central Service Area had no functional acres gained in 2021. See Figure 19.

Of the 1,059,696 functional acres gained, all were attributed to projects located in a Core Area.

Table 6. The number of functional acres gained due to the implementation of credit projects that closed or were implemented between January 1, 2021, and December 31, 2021, across all Service Areas. Functional acres reported in this table are before baseline has been applied (closed Stewardship Account grants).

Source	Functional Acres Gained by Service Area				
	Central	North Central	Southeastern	Southwestern	Statewide
Stewardship Account Grants	342,517	0	0	717,179	1,059,696

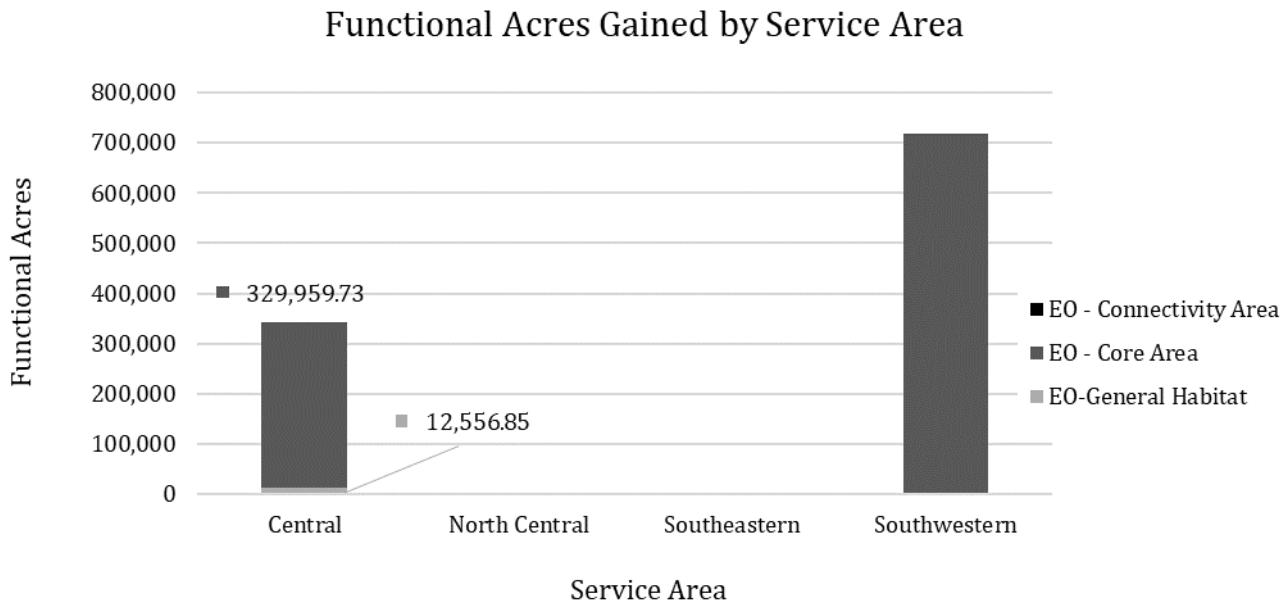

Figure 19. Number of functional acres gained by Service Area and Executive Order 12-2015 habitat designation for credit projects that closed between January 1, 2021, and December 31, 2021 (n=5 Stewardship Account grants)

Credits Created by Completed Projects: Stewardship Account Grants and PRM Projects

The number of credits for a credit project is determined *after* applying the baseline adjustment to preservation credits and applying any additional multipliers for newly created credits through restoration or enhancement projects. The following summarizes the total number of credits created by credit projects completed or closed between January 1, 2021, and December 31, 2021 (i.e., closed Stewardship Account grant projects). No PRM projects were implemented in 2021. All credits in this section were generated from Stewardship Account grant projects. See Table 7 and Figure 20.

Table 7. Number of available credits for implemented and closed credit projects by Service Area after the baseline adjustment and any applicable policy modifiers have been applied. These numbers reflect credits gained from both Stewardship Account Grant projects completed between January 1, 2021, and December 31, 2021.

Source or Entity	Credits Created by Service Area				
	Central	North Central	Southeastern	Southwestern	Statewide
Stewardship Account Grants	137,007	0	0	286,872	423,878

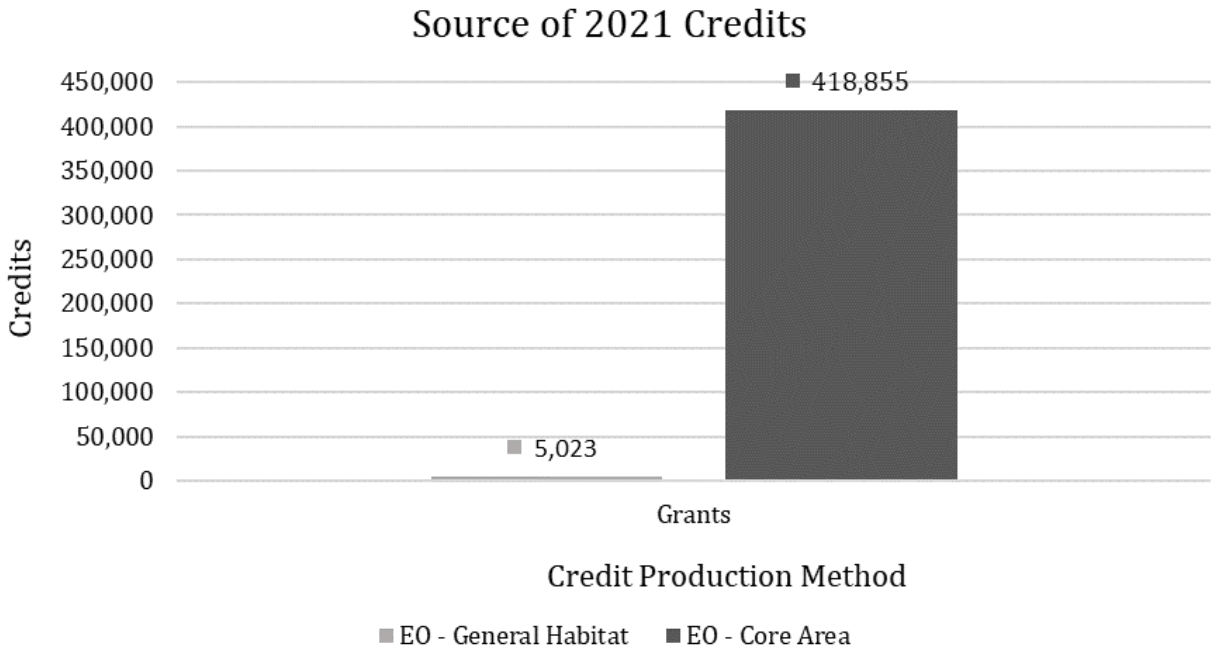

Figure 20. Number of credits created by five MSGOT Stewardship Account grant projects that closed between January 1, 2021, and December 31, 2021.

Number of Credit Projects and Total Credits Created by Service Area and Habitat Category

Between January 1, 2021, and December 31, 2021, a total of five credit projects were closed (n=5 Stewardship Account Grant projects). This resulted in the creation of a total of 423,878 credits. Of the five credit projects, three were implemented in the Southwestern Service Area, two were implemented in the Central Service Area. There were no credit projects implemented in the North Central or Southeastern Service Areas in 2021. See Figure 21.

The vast majority of available credits have been produced by projects located in Core Areas (99%). Of the total available credits, only 1% can be attributed to projects located in designated General Habitat.

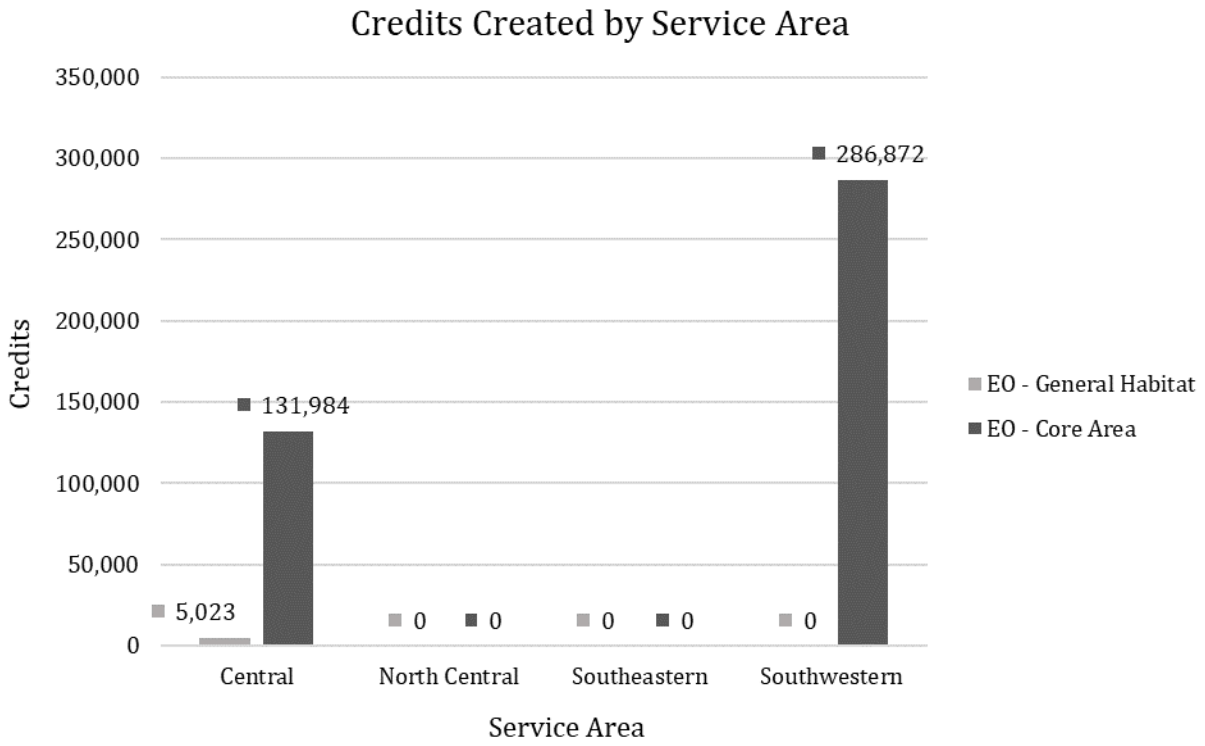

Figure 21. Total number of credits created by Service Area and by Executive Order 12-2015 habitat designation, all entities/sources combined (Stewardship Account grants), for projects that closed between January 1, 2021, and December 31, 2021.

SYNTHESIS OF MITIGATION SYSTEM KEY METRICS FOR ALL YEARS

As of December 31, 2021, a total of 923,606 debits have been created due to the implementation of development projects throughout all four Service Areas. This number takes into account all projects that required an HQT, associated mitigation, and reached *Completed Review* or *Concluded* status by December 31, 2021 (n = 247). In contrast, as of December 31, 2021, a total of 1,632,846 credits were created by MSGOT through Stewardship Account grants. See Table 9. These figures include only projects for which a contribution to the Stewardship Account was the chosen option to fulfill the mitigation obligation. It does not include projects for which permittee-responsible mitigation utilized to fulfill the mitigation obligation.

Stewardship Account Contributions

Since the final administrative rules took effect, all contributions to the Stewardship Account should be allocated towards Stewardship Account grants to offset the impacts of the development project for which the contribution was made. A total of $6,063,640.67 has been contributed to the Stewardship Account from 2018 through December 31, 2021, by developers who decided not to implement their own permittee-responsible mitigation projects and transferred their mitigation obligation to the state.

As of December 31, 2021, Program records reflect that $420,731.39 is owed to the Stewardship Account. See Table 8. The $420,731.39 owed to the Account is attributed to projects which reached *Completed Review* or *Concluded* by December 31, 2021, a mitigation obligation exists, and the developer selected the Stewardship Account option to offset impacts of the proposed development project. It is the Program's understanding that these developers have delayed starting the permit application process, started the application process but have not yet obtained all necessary permits, or has obtained all necessary permits but delayed actual implementation.

Table 8. The total amount owed to the Stewardship Account attributed to each project type through December 31, 2021.

Project Type	Number of Projects	Amount Owed
Communication	5	$24,062.31
Forestry	1	$7,378.24
Industrial/Commercial	2	$4,165.98
Mining	24	$91,608.17
Oil/Gas	8	$114,649.08
Pipeline	2	$15,263.93
Subdivision	4	$8,460.09
Transmission Line	1	$32,878.52
Transportation	1	$115,545.03
Water	2	$6,720.04
Grand Total	**50**	**$420,731.39**

Table 9. Overview of the key mitigation metrics by Service Area. The data in this table represent all development projects for which an HQT calculation was completed (n=247) and all credit-producing Stewardship Account grants (n=12) implemented as of December 31, 2021[6]. These numbers do not include debits attributed to projects for which permittee-responsible mitigation was the chosen mitigation method nor does it include credits attributed to permittee-responsible credit projects.

	Service Area				**Statewide**
	Central	**North Central**	**Southwestern**	**Southeastern**	
Debit Project Count	101	58	29	59	247
Functional Acres Lost Before Multipliers	448,780	50,951	6,314	58,199	564,244
Total Debits *(Excluding Advance Payment and Reserve Account Debits)*	**795,555**	**51,210**	**9,236**	**67,605**	**923,606**
Credit Project Count (Stewardship Grants)	6	1	5	0	12
Functional Acres Gained Before Baseline Adjustment and Multipliers (Stewardship Grants)	2,242,236	72,336	1,670,050	0	3,984,622
Total Credits	***935,892***	***28,934***	***668,020***	***0***	***1,632,846***
Balance of Available Credits	140,337	-22,276	658,784	-67,605	709,240

[6] During the 2021 reporting period, updates to the web application included merging of the Program master database with the Program web application. This resulted in revisions of data for some earlier projects and may result in numbers that differ from previous reporting periods.

Permittee-Responsible Projects for All Years

From 2018 through December 31, 2021, three permittee responsible projects have been implemented by one developer. These projects include two conservation easements and one oil and gas field restoration project. All three projects are located in the Southeastern Service Area. See Figure 22 below for locations of these projects and Table 10 for credit details.

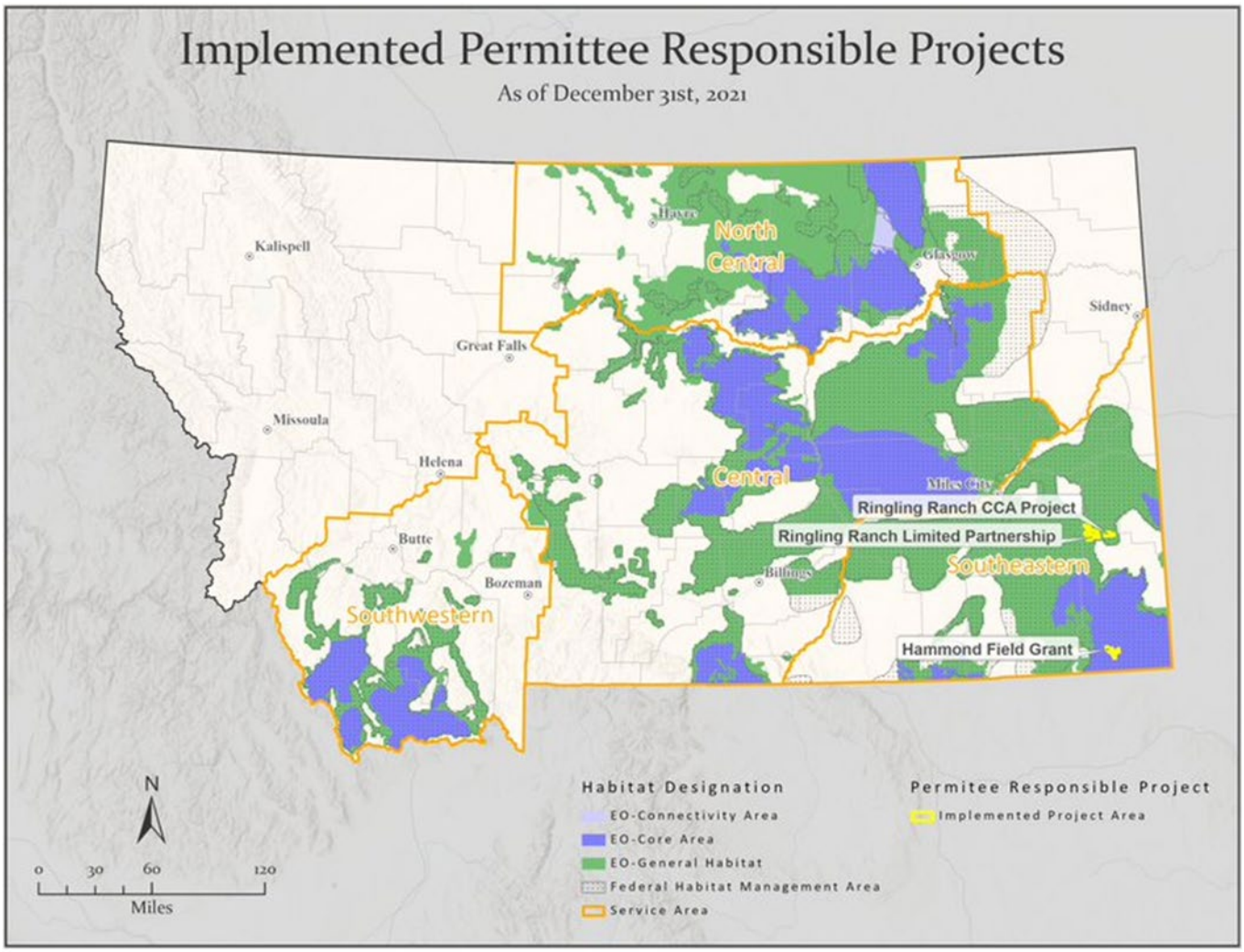

Figure 22. Locations of Permittee-Responsible Mitigation projects that have been implemented from 2018 to December 31, 2021.

Table 10. Total credits attributed to PRM Projects for all years.

Project Name	**Credits**
Ringling Ranch Conservation Easement	110,814.00
Ringling Ranch Ltd. Conservation Easement	118,094.04
Hammond Field Reclamation	349,318.83
Total	**578,226.87**

ADAPTIVE MANAGEMENT

Adaptive management is a fundamental principle of the Montana Mitigation System. When it comes to conserving sage grouse populations, much is known about the species' habitat preferences and population responses to the loss and fragmentation of sagebrush habitats. However, less is known about how sage grouse populations respond to anthropogenic disturbances and more generally to mitigation measures which are intended to offset anthropogenic disturbance. Furthermore, Montana's Mitigation System includes assumptions in both the Policy Guidance and the HQT Technical Manual in the absence of perfect knowledge or experience in implementation. For these reasons, the Montana Mitigation System implements an adaptive management approach to periodically evaluate whether mitigation effectively offsets impacts in space and through time, to ensure sage grouse populations are sustained, and to assure Montana achieves the standard of no net loss of habitat.

Adaptive management requires consideration of both habitat outcomes and population status and trends over time, in concert and at multiple spatial scales. The Program's focus is on habitat outcomes while population monitoring, population estimation and reporting, and harvest management remain the purview of MFWP. Please see MFWP's Greater Sage-Grouse Population Reports.

Sage Grouse Program specific habitat-based objectives are as follows:

- Meet the mitigation standard of no net loss, net gain preferred.
    - The number of functional acres created should be equal to or greater than the number of functional acres lost (i.e., HQT results prior to the application of modifiers).
    - The number of credits created should be greater than or equal to the number of debits.
- Maintain sufficient credits in the reserve account to replace lost or impaired credits.
    - The reserve account should have a sufficient number of reserve credits to replace lost or impaired credits listed and already used and assigned to offset debits.
- Produce and maintain an adequate credit supply, regardless of the entity who creates them.

Adaptive management does not just occur at static intervals, it is a fluid process and one that the Program, stakeholders, and interested publics continue to take part in throughout the years (Figure 23). Through the process of continual improvement, the Program developers and credit providers learn and implement improvements to protocols, documentation standards, etc. See the Efforts to Improve Implementation section above for details on efforts implemented in 2021.

One area for an adaptive management focus is that the Program lacks knowledge of the status and ultimate disposition of development projects for which it has completed a review. Additionally, the Program lacks knowledge about when contributions to the Stewardship Account will be made by developers who elect to offset impacts by making a contribution.

Because there is no communication feedback mechanism between developers or the permitting agency and the Program, the Program lacks knowledge about whether a permit was applied for and when relative to the *Completed Review* date, whether the project is still in the permitting process, whether a permit was issued and whether a project was cancelled or when it was implemented.

In short, the Program lacks knowledge about whether a project did or did not proceed. While time lags can be expected, their duration and the final disposition of the project is unknown to the Program. The time lag between when the Program has completed its review and when a project is actually implemented could be a year and sometimes much longer. In some cases, proponents have cancelled projects altogether.

Another challenge associated with the lack of knowledge and the time lag is that the Program can't predict when a contribution to the Stewardship Account will actually be made when proponents select that option. Contributions might be made within 1-3 weeks of when the Program completes its review. On the other end of the spectrum, some contributions have been pending for up to two years. Contributions are slated to be made after a developer obtains all necessary permits but before implementation. As of December 31, 2021, developers have committed to offsetting impacts of their projects through a contribution to the Stewardship Account, but $420,731.39 in contributions is still pending (Figure 17).

Changes to reporting requirements and/or agency protocols would improve data integrity, accuracy of disturbance data, fiscal management of the Stewardship Account, and accuracy of the credit/debit ledger. Improvements here affect implementation of the existing mitigation framework and associated business processes but not the framework or HQT itself. Until a feedback mechanism and protocols are devised, the Program has followed up on a limited number of specific projects to learn the status and disposition, in addition to hiring an independent contractor to update the Program's existing disturbance spatial data. Both endeavors require staff time and budget resources.

Stakeholders have engaged with the Program on a regular basis and will continue to do so. The Program will work with MSGOT and stakeholders to identify additional topics and potential priorities for an annual adaptive management review. Any changes after just one year should be minor in nature so there remains continuity of experience and data collection to amass enough information to establish a track record to identify major substantive issues and to inform deliberations and eventual policy solutions. Nothing suggests that limitations or unexpected outcomes have been so universally experienced by developers or credit providers that could not be overcome through MSGOT's deliberations or that would trigger a major review / overhaul on its own merits at this time.

Once every five years, a more substantive adaptive management review should take place. Because 2021 marks the completion of only the third full year of implementing Montana's Sage Grouse Mitigation Framework, not enough experience and data have accumulated to inform or identify areas needing substantive, material review, triggering major changes and administrative rulemaking. A more substantive review would be targeted for 2023-2024. However, in the intervening years, MSGOT remains available to address limitations of either the HQT or mitigation policies in the interim.

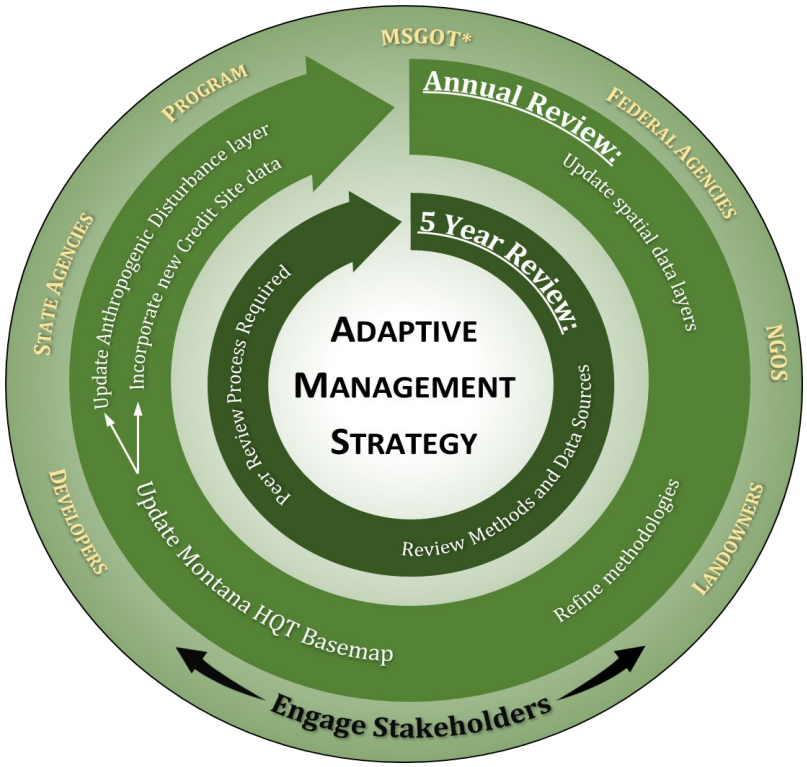

Figure 23. The Sage Grouse Habitat Conservation Program's Adaptive Management Strategy.

GIFTS, TRANSFERS, BEQUESTS, OR DONATIONS

The Act also provides that MSGOT can review and decide whether to accept offers of grants, gifts, transfers, bequests, or donations of money, personal property or interests in real property other than fee simple. The Act also requires the Program to report any activity regarding appropriations, gifts, transfers, bequests, or donations received, including interest in real property on behalf of the Program. No such activities have occurred.

INTERAGENCY COLLABORATION IN 2021

Throughout 2021, the Program periodically consulted with the USFWS to assure the State is kept abreast of efforts to establish the process for how the status review may be conducted, or any changes to federal policy that might affect Montana's Conservation Strategy. This included

conference calls to discuss data needs, schedules, and tasks needed to meet anticipated status review requirements.

The Program continued to meet periodically with FWP, USFS, BLM, USFWS, and NRCS to coordinate efforts. Coordination with FWP is particularly important in that FWP makes vital contributions to the Program, including compiling seasonal lek survey data, conducting, and sharing ongoing research results, and providing critical input for mitigation tools and policy development.

The Program continued to coordinate closely with other state agencies and entities, including the Montana Legislature and the Environmental Quality Council, Montana Department of Transportation, and Montana Board of Oil and Gas Conservation, as these entities implement their own programs and statutory duties.

In 2021 the Program continued to develop its unique and productive relationship with the BLM. Montana BLM land use plans and amendments continue to implement the State of Montana's DDCT calculation method which provides important consistency across Montana's checkboard land ownerships and management boundaries. The State and BLM also continued to work closely on development of the HQT model and policy processes to ensure coordinated responses to development projects throughout the state. Thus, the Program provides technical support and stores data that will ultimately assist the BLM in demonstrating implementation and compliance with its own land use plans and amendments.

APPENDIX A

Montana Sage Grouse Conservation Benchmarks: 2021

2021

Bureau of Land Management: On November 22, 2021, the Bureau of Land Management (BLM) issued a scoping notice seeking public comment on amendments to their 2015 and 2019 Greater sage-grouse conservation plans. The comment period for the public scoping will close on February 8, 2022. Final amendments are anticipated to be completed in 2023 or 2024.

For conservation benchmarks between 1965 and 2020, see the Montana Sage Grouse Conservation Benchmarks document located on the Program website (https://sagegrouse.mt.gov/About#resources).

APPENDIX B

Montana Conservation Strategy: 2021 Implementation Chronology

2021

February 2021

- February 25 MSGOT Meeting
    - MSGOT approved Clearwater Energy Resources LLC corporate guaranty offer associated with the Clearwater Wind Project.

March 2021

- March 24 MSGOT Meeting
    - MSGOT decided on the final and remaining contribution amount by Clearwater Energy Resources LLC to fulfill their compensatory mitigation obligation associated with the Clearwater Wind Project.
    - An overview of sage grouse population numbers was presented to MSGOT by Montana Fish, Wildlife, and Parks (MTFWP).

April 2021

- Senate Bill 230 signed into law, directing the Program to transfer a percentage of compensatory mitigation funds from the Stewardship Account to the State General Fund to repay the initial implementation of the Stewardship Act.
- Senate Bill 249 signed into law, revising funding of the Program by authorizing a cost-sharing agreement between the Montana Department of Natural Resources and Conservation (DNRC) and MTFWP. Additionally, this bill recodified the Stewardship Act in Title 87, MCA.

May 2021

- Senate Bill 284 signed into law waiving certain costs incurred by counties, cities, and towns related to Opencut mining operations.

September 2021

- September 16 MSGOT Meeting
    - The Program presented MSGOT with a PowerPoint detailing the HQT model and function.
    - No executive action was taken at this meeting.

October 2021

- October 14 MSGOT Meeting
    - MSGOT hosted a listening session and public comment opportunity.
    - No executive action was taken at this meeting.

Upgrades to the Program website were implemented throughout 2021, as they became available. These upgrades sought to improve both user experience and program efficiency. Details can be found on the Program website (https://sagegrouse.mt.gov/About) in a document titled *What's New – New Web Application Features 3-7-22.*

For implementation chronology between 2015 and 2020, see the Montana Sage Grouse Implementation Chronology document located on the Program website (https://sagegrouse.mt.gov/About#resources).